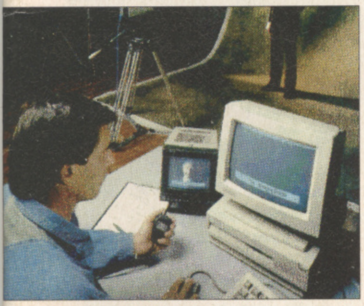
Issue 133 • 25th May 1991 • 88p

TONS OF TIPS FOR YOUR MACHINE
see pages 16, 18-29, 33, 40-1, 43, 50-51...

NEW COMPUTER EXPRESS

FIRST NEWS • FIRST REVIEWS • BEST BUYS • YOUR WEEKLY GUIDE

AMIGA

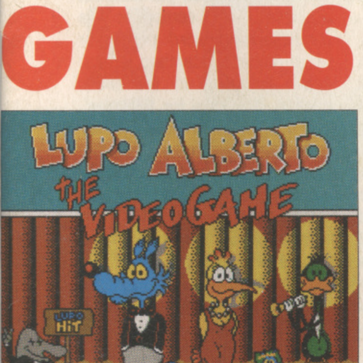


MULTIMEDIA MARVEL AT THE NEW A3000 SYSTEM

APPLE

COLOUR MACS GASP AT THE TWO NEW LOW-COST LCs

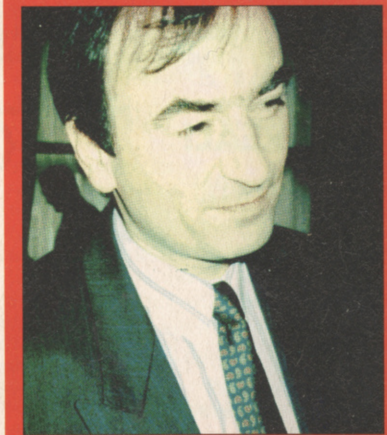
GAMES



LUPO ALBERTO
LOVELY – OR JUST LOOPY?
PLUS – FLIGHT SIM CITY!

NOW ATARI GETS SERIOUS!

EXCLUSIVE!



- STE price is SLASHED by £50...
- But the Mega goes UP by £100
- And it's BYE-BYE to the STFM!

"We're shifting the ST right away from games. We are going serious"

– BOSS BOB GLEADOW SPELLS IT OUT

FIND OUT WHY ON PAGES 6 & 7

PLUS: Your keyboard is on the way out – read our special report, page 5

AMIGA: 16 *MILLION* COLOURS!

HOW THE HAM-E CARD CAN BRING PHOTO-REALISM TO YOUR SCREEN FOR UNDER £300

Future Publishing
Your guarantee of value

Frontend

DONS DONE BY VIRUS

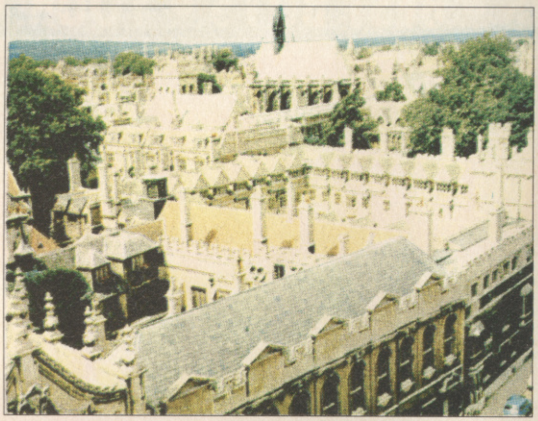
Oxford University has been bludgeoned by a virus called Spanish Telefonica. The infection is designed as a protest against rising telephone charges in Spain.

Telefonica infects the bootblocks on the hard disks of MS-DOS based machines. It was brought onto the campus on a floppy disk and, in the computer intensive environment of the University, has spread rapidly from machine to machine.

Express spoke to Detective sergeant Gerald Causer of the Thames Valley fraud squad, the man leading the enquiry into the virus which has destroyed thousands of hours of academic work. He told us: "The virus infects the boot blocks of PCs and creates a counter, this adds one every time a machine is switched on. Once the count reaches 400 a message fills the screen and the hard disk is totally over written".

When translated, the message reads 'Lower tariffs! More services'.

Spanish Telefonica is an extention of the Holocaust virus which has been doing the round of the computer world for a number of years. It infects .COM and .EXE files, moving from machine to machine on floppy disks. Before becoming destructively active, it hangs on these files and slows the operation of the PC down slightly.



• Oxford University: traditionally a seat of great learning. Now it is the site of techno terrorism with a distinctly Spanish flavour.

Whether it got into the university system through a malicious act of wanton hooliganry or an innocent mistake is unknown. Detective sergeant Causer explained: "This is the third report of this particular virus we have had in the Oxford area. The others occured in businesses. It could have been someone doing it deliberately, we don't know at present, but we are liasing with the Metropolitan police computer crime unit at the moment".

Authorities at Oxford university are working day and night to rid their machines of Spanish Telefonica. But at the time of writing, there was no way of tracing exactly how many PCs were suffering from the virus. ■

• Could a computer help you to meet this gorgeous three headed lady?

Computer guided love

Japanese companies are spending millions of yen on computer-based dating systems. This is no idle expenditure, it is based on the theory that love-linked workers operate more efficiently that lonely single ones.

Mitsubishi is at the forefront of the labouring love initiative with its Diamond Family Club. The company claims that it is achieving 100 marriages a year from within its 50,000 work force in Japan. Mitsubishi staff do not receive this service as a perk however. An initial payment of the equivalent of £200 has to be made to get a place on the database. Another £200 is paid if an engagement ensues.

Expensive it might be, but it is a great deal more efficient than the more traditional method of finding a match. This entailed riding into town on what ever vehicle was nearest, and calling out for partners. ■

GET REAL!

HDTV not a PAL

High Definition Television (HDTV) the proposed world standard for televison transmissions is not good enough for Europe, and that's official.

A meeting of top Euro-broadcasters has just come up with the idea of scrapping the PAL (Phase Alteration by Line) system which will be familiar to ST and Amiga users as the standard for computer monitors.

The European Commission is desperately trying to forge an agreement between electronics, television and satellite operating companies which will see the death of PAL. Any such agreement would need to be in place before European telecommunications ministers meet on June 3. ■

GET REAL!

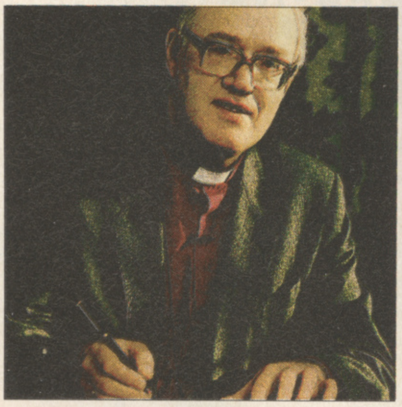
COMPUTER MAKES BIG SPLASH

The America's Cup, that bastion of boating, is now under the influence of computing power.

Hewlett Packard is helping the US Stars and Stripes team with its boat design. Prior to the input of computing technology the team had to build 40 yachts in order to test them. With the use of Hewlett Packard's technology, this number has been cut to 15.

HP is also donating PCs, workstations, printers, plotters and other peripherals to officials of the race. ■

COULD YOU RE-WRITE THE BIBLE?



• Archbishop Carey - A known computer nut. But will he win the lastest in religious software competitions? Well,

What could possibly unite an Amiga owner with an ST user? The answer is, a competition which offers cash prizes and entails writing Bible-related software.

Set up by a company called Evangeltrust, the parent company of the Evangelsoft publishing house, which works from the dictum 'Why should the devil have all the best computer software?', the competition is open to people of all ages. Users of the following machines are more than welcome: PC, Amiga, ST, PCW, BBC 'B', Archimedes, Einstein, and Spectrum.

To win, entrants have to produce a new program, such as a game or database which can be used in the study of the Good Book.

Prizes on offer include £50 cash, and £50 of Evangeltrust software. The competition closes on December 31.

Entry forms and full details are available from Bible Software Comp, Evangeltrust, PO Box 224, Kingston Upon Thames, Surrey KT1 2NX.

SALES BITCH

A press release lays on the desk. It reads: 'Software to sell fridges to eskimoes'. Interesting, but surely eskimoes need fridges as much as anyone else - you don't want to leave your food out in the garden to get eaten by polar bears do you?

Unfortunately, the press release in question which relates to a program called, *SalesCraft* from Brainwave Computers, avoids the question of food freezing, eskimoes or even igloos for the rest of its six paragraphs. Instead it mentions that the software costs £452.37 and is 'accessible to even the smallest business'. It comprises a database, and word processor which produces standard letters. Again according to the press release, 'it is ideal for telesales', 'relevant to any company', 'available for the mass market', 'designed for use in all business sectors', you get the idea.

Still no mention of the frozen North. Front End wonders when the 'Sand to the Arabs' follow-up is due. Until then, more information is available on this number 081-903 0211. ■

MICROS ARE JUST THE LIBRARY TICKET

The age of philanthropy is not dead. Specialist hardware house Geac is celebrating its 20th anniversary by giving away free computer systems to 20 libraries around the world.

All the potentially lucky librarians have to do is submit a five page essay on why automating their systems would lead to improvements in service.

This follows on from AT&T's charitable give-away of $4.2 million worth of equipment to colleges which we reported last week. Which computer company will the next one to follow suit? Write into Express Mail with your ideas.

For more information on winning a Geac system you should phone 0101 416 4775 0525. ■

• Some people like to burn books. But not computer people , they far prefer to celebrate them.

A MURDER MOST FLOPPY

A US Marine captain. A 5.25 inch, PC compatible disk. A woman, and a life insurance policy.

All factors in a possible murder. The captain is called Robert Russel and he is currently on trial charged with conspiring to kill his now missing wife. The major piece of evidence in the courtroom is the disk which contains a file called simply, 'Murder'.

The files contains phrases such as: 'How do I kill her?', 'Plastic bags over feet' and 'Check in library on ways of murder electrocution'. The disk was found by marine sergeant major William Jospeh Kane as he cleaned out the captains office in February 1988. The reason for the clean out was that Russel had been relieved of duty. This occured more than a year before Shirely Russel went missing.

While the evidence looks stacked against captain Russel. His defence against the incriminating disk is that the information relates to a book he was writing. The case, as they say, continues. ■

GET REAL!

Feds fed up with computers

The FBI is trying to introduce legislation which will force businesses and individuals to build-in 'back doors' to password and data enncryption systems.

The Feds are finding it more and more difficult to keep tabs on data communicated by suspected criminals due to the rapid advances made in encryption techniques. In a bid to get more access to fax and modem lines, as well as files held on computers, the FBI together with the Department of Justice has proposed a bill which they hope will 'ensure that communications systems permit the government to obtain the plain text contents of voice, data and other communications'.

If this becomes law, then businesses and individuals who use passwording to protect sensitive information will be faced with a situation where they have to provide the authorities with easy access into their systems. In effect this means that every hacker with a yen to break into a computer operation will know that there is a 'back door' built into it by law. ■

GET REAL!

LE MICROS

ROVER
olivetti
12
DUNLOP
Evesham Micros

A car racing team sponsored by Evesham Micros among other computer-related companies went to Le Mans in France in order to win round three of the 1991 Dunlop Rover GTi championship. And it won.
Micro's managaging director, Richard Austin drove one of the team vehicles, while current championship leader, Dave Loudon drove the other - and race winning - car. This was Loudon's first outright win of the season.

The next outing for the Evesham crew is at Silverstone on May 19th. ■

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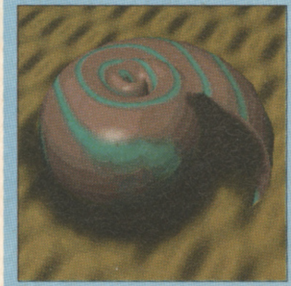

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Elite's randy ninja games

• No, it's not some modern ballet - it's Elite's lethal Last Battle!

Elite is to release an avalanche of coin-op conversions for machines ranging from the ST to the Nintendo Entertainment System *(NES)*.

Included in the proposed launches are *Edward Randy*, which is of interest, according to the company, for 'the way *Edward* uses his whip for moving, balance and as a deadly weapon'.

There's also a ninja-game, *Ninja Caveman*, converted from the arcades by *Shadow of the Beast* programmer Eldritch the Cat.

Last Battle, a beat-'em-up features the 'Jet Kwon Do' martial art form and a whole plethora of other lethal weaponry while *European Championship 1992*, is the timely renamed version of *World Cup 90*. Teams such as Brazil and Argentina have been dropped but essentially the game remains the same.

Release dates for *Edward Randy*, and *Caveman Ninja* have not been confirmed. *Last Battle*, is due out in June for the ST, Amiga, and PC, and in August for the C64 on cassette and disk. *European Championship 1992*, is available from the autumn.

For more information call Elite on 0922 55852. ■

A game for the BBC B!

Well it's for the BBC B, Master, Archimedes and Acorn A3000. It's called *Selladore Tales*, and it comes from Sherston Software.

***Selladore*, is aimed at children with reading difficulties, specifically at those who have a reading age of eight years or below, yet are over 11 years old.**

There is an illustrated, 13 chapter book called *The Curse of Zorin*, which introduces the players to the land of *Selladore*. This leads onto the adventure game itself, called the *Black River Quest*.

Included with the package are photocopyable activity sheets, and creative writing cards. The whole bundle supports AT2 in the National Curriculum.

Price is £31.20. For more information contact 0666 840433. ■

Software copying is OK

According to a sub-committee of the Hong Kong Law Reform Commission copying software should not be a crime.

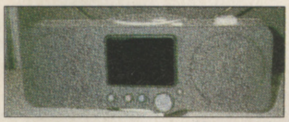
The committee has put together a report which says that end-user copying of computer programs should be decriminalised. This conclusion is based, for the most part, on two points; firstly that prices for legally obtained programs in Hong Kong are vastly inflated, and once paid the level of user support is minimal, secondly, that unpirated software is nearly impossible to obtain.

The report is a major setback for both the Business Software Alliance (BSA) and the Software Publishers' Association (SPA) in their efforts to clamp down on pirated programs world wide.

According to Jeff Siebach, vice president of the Washington-based BSA: "At the moment when a company considers whether to purchase legitimate software, it must balance the cost of acquiring a legitimate product against the cost of committing a criminal offence. If the recommendation is adopted ... the balancing has gone. There is no criminal risk". ■

Sony announces desktop CD mastering

CHEAP CD-I IS HERE



• Sony's prototype yuppie blaster; video and audio on the same CD get closer

Developers working on Compact Disc Interactive (CD-I), CDTV and CD-ROM titles will be pleased to hear of a new CD mastering workstation from Sony.

The UNIX based system which costs £40,000 - half the usual cost - will make the prototyping of CD formats a desktop process. Currently, developers have to dispatch masters to expensive third party agencies.

According to John Glasson, Sony UK's marketing manager in charge of the Microsystems group, who spoke to Express this week: "The system will write up to 32 CDs simultaneously in four standard formats".

These formats are:

- International Standards Organisation 9660, the accepted worldwide standard. Commodore's CDTV titles are based on this system.
- High Sierra. Adopted by Apple Computers as a standard for its own CD-ROM platforms.
- CD-ROM XA. The audio and computer data CD format devised by Sony.
- CD-I. The video/ audio and data platform developed by Sony, Philips and Matsushita.

While the CD-ROM market is growing steadily in the US and Europe and CDTV titles are at last beginning to emerge, there is yet no sign of either CD-I machines or titles. Aside from three prototype machines which Sony showed in June 1990, no solid commercial evidence of CD-I as a 'standard' has yet seen the light of day.

However, the introduction by Sony of CD-I as an accepted standard on its own writeable CD system will doubtless give small to medium-sized software houses the means of creating relatively cheap masters.

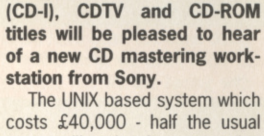
Sony's plans go beyond the costly UNIX workstation however. Mr Glasson told us:"The encoder and write unit will be for the PC. We or our distributors will also sell the interface". ■

MASTERING CD TECHNOLOGY

Sony's new compact disc mastering system costs a hefty £40,000 to buy. It comprises four modules:

- **The Encoder. This is to translate data into a CD-compatible format. In jargon this is termed as 'sucking' information. Once encoded, the system will 'blow' the newly formatted data onto the disc via the next module.**
- **The Write Unit. 32 of these units can be daisychained onto one encoder. Its job is to 'blow' the formatted data onto the CD. Each 650Mb CD takes an hour to be fully written.**
- **UNIX workstation. The whole system is driven by this. However, a £37,000 system using the encoder and write unit but driven by an Amstrad 386SX is rumoured to be available.**
- **Finally there's a user-friendly interface for the actual coding.**

Ninja rabbits on



*• Oh no!
It's the white rabbit of death, and he's not amused.*

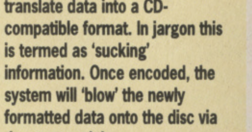
After the turtles come the rabbits. Microvalue's latest budget title, *Ninja Rabbits*, features white clad psycho-bunnies on the rampage.

Essentially the game is a beat-'em-up which makes use of horizontally scrolling levels. The scenario is that the rabbit's environment is polluted by nerve gas. The upshot of this is that otherwise peace loving badgers, people and forest animals turn against the innocent, but heavily armed bunnies. The task is to find the chemical plant where the gas is made, and destroy it.

Available on Amiga and ST for £8.21, PC for £11.82, C64 cassette for £3.51,and C64 disk for £5.86, the game is out now. ■

Revenge is thine

***Chinto's Revenge* is a top-notch beat-em-up from Millenium which features 400 locations, mazes, and traps. Your task, as Chinto, is to seek revenge for the gruesome slaughter of your entire family during a gang war.**



• Kill my family would you?

Not only are there shurikens, knives and axes to use, there are also enemies to use them on, and ginseng to keep you going.

The ultimate task is to meet and defeat the evil Dragon Lord himself.

Available on the ST and Amiga for £30.38, *Chinto's Revenge* is available in July. ■

She's higher than a kite

If you are reading this story on Thursday 24 May, then above your head is a British astronaut called Helen Sharman and she's using a Poqet PC.

The first Britain in space blasted off on the Juno mission from Baikonur in the Soviet Union on Saturday 18 May, and has just spent six days aboard the Mir space station. The Poqet PC, which weighs 1Lb, is being used by Sharman as a celestial diary after the Soviets agreed to allow it onboard.

The UK project manager of the Juno mission explained the reason behind taking the Poqet up in space: "Absolutely critical in space flight is the size and weight of any items carried at launch".

The tiny computer has an 80 column by 25 line screen, a QWERTY keyboard, and is the size of a video cassette. It is currently priced, to astronaut and earthbound user alike, at £1,298.70. For more information call 0753 580018.

If you're reading this after Thursday May 24, then Helen will have landed and will be being debriefed. ■

ROM live the Queen

• "My hardware and I..." HRH prepares to receive her new piece of snazzy digital kit from the Yanks.

Her Majesty the Queen is to be honoured with a CD-ROM disc from the Library of Congress.
In order to commemorate her recent visit to the USA, On Line Computer Systems has produced a disc which contains the full list of works held at the Library of Congress.
It will be officially presented to the British ambassador, Sir David Acland, before coming home to the British Library for reference work. ■

Sophisticated pen-input systems set for home use by early 1992

KEYBOARD KILLERS

The first word processor specifically designed for use with pen-input systems, and aimed at the home user market, has just been demonstrated in the States.

Called *Professional Pen Plus*, the program will run under Microsoft's Windows extention, PenWindows. It is currently priced at $249, and makes use of sophisticated handwriting recognition as well as pen 'gestures'. In common with other systems, it will also be user-modifiable.

Although its effectivness as a word processor is yet to be really put to the test, the sub-$300 price tag takes pen-input out of the specialist environment, and places the technology firmly in the hands of both the home user and the non-specialist business user.

Two pen-based operating systems (O/Ss) from different companies are currently leading the vanguard of the keyboardless battleground. Microsoft, the American giant responsible for MS-DOS and the Windows graphical user interface (GUI) is now providing software houses with development kits for its PenWindows O/S. This system will be launched in November, initially as an extention to Windows 3.1 (which will be released at the same time).

Go Computers, again from the United States, has developed the other pen-input system, known as Penpoint. It has already been seen running on the GRiD Pad (reviewed by *Express* in our March 9 issue, number 122). While Microsoft is the larger, more established organisation, Go is certainly in with a chance due to ill-feeling directed towards Microsoft from certain large software houses – notably Lotus Corp, publisher of the industry-standard *1-2-3* spreadsheet.

However, and in order to keep its options open, GRiD Computers' next range of keyboardless laptops will be compatible with both PenWindows and Penpoint.

Essentially, the pen-input operating systems which are commercially available at the moment are aimed at specific operations such as data entry in a warehouse environment, where only alphanumeric characters such as serial numbers and abbreviations need to be entered. But the pen systems which will be available towards the end of this year and – more excitingly – in the early half of 1992 will be pitched towards the home and business user.

Microsoft has already demonstrated a system called Pen Notebook by handwriting '2+2=' on the screen with a stylus. Not only does the PenWindows-based system turn the handwritten characters into type which can be understood by the PC, it also completes the calculation and prints the result.

• Pen-input is coming to the mass market, but could advances in voice recognition input systems mean that it is already old hat?

Two other systems, one called *WindowsWrite* and the other based on Borland's *Objectvision*, are also under development.

Next week *Express* will bring exclusive details of a UK-produced pen-input system. Watch this space... ■

Ten Facts About Keyboardless Input Systems

1) Pen-input systems do not work with Optical Character Recognition (OCR) but with Handwriting recognition.
2) Microsoft's PenWindows has already be seen running on a 386SX PC with a graphics tablet as the input device.
3) Toshiba is currently hard at work on a system which consists of a Pen-based computer with a detachable screen.
4) Kyocera has already shown a personal organiser with a touch-sensitive screen.
5) Psion has already developed a pen-input system to extend its HC-100 series.
6) Voice recognition systems are now available for the Mac (Voice Navigator II) and the PC (Soundmaster).
7) Atari's keyboardless ST, the ST-Pad is due for a Spring 1992 launch. And according to Atari UK's marketing manager, it is hoped to cost "under £2,000".
8) Launches for GRiD Computers' pen input computers which will run both PenWindows and PenPoint are due in the last quarter of 1991.
9) GRiD has designed computers for oil rigs which are termed as 'intrinsically safe' – which means that they don't cause explosions! Because key presses can cause tiny sparks, a pen input system had to be developed.
10) 'Gesture' is the term used to describe non-alphanumeric characters such as ticks, underlines and so on.

'Beefier' MAC LCs launched Stateside

Apple has launched two new configurations of the Mac LC in the States, in response to requests from corporate customers who want a more powerful colour Macintosh without having to pay for a member of the Mac II series.

The new configurations don't include keyboards because, according to spokesman John Cook, corporate users like to add their own.

The new bundles are a 2Mb, 40Mb hard disk LC for $2,499 and a 4Mb, 80Mb hard disk machine which sells for $2,999. What sets them apart from the current LCs on the market is the fact that they include 512K of extra video RAM, which allows them to display 16-bit colour on the 12-inch monitor, or 256 colours on the 13-inch Apple monitor – which is the standard requirement in many companies.

Whether the new bundles will be sold in the UK is debatable – there are currently a number of Macintosh configurations, such as the twin-floppy Mac LC, which are available in the States but are not available as options to purchasers over here. ■

Tandy launches multimedia PCs

High-street electronics and computer retailer Tandy is set to launch a range of multimedia personal computers with sophisticated sound, graphics and CD-ROM support. The machines will be launched under the collective name of Multimedia Personal Computers (MPC).

Machines in the range, which will include 286, 386 and 386SX-based PCs, will all come complete with a Tandy CDR-1000 internal CD-ROM drive. Each will also include a media expansion adaptor with audio circuitry, 256-colour VGA graphics, 2Mb of RAM, and a 40Mb hard disk. Microsoft Windows and Windows Multimedia Extensions are to be supplied as standard.

Prices start at £1,500 for a 16MHz 286 M2500XL/2, while the top of the range M4033LX, a 33MHz 386 , is expected to cost around £3,000. ■

LANs ahoy! For the ST

A Local Area Network compatible with the Mac and PC has just been announced for the Atari ST.

The system, called The Universal Network, works as a background application in much the same way as Novell's Netware does on the PC. The Universal Network does not limit the number of STs which can be linked in a network, although a minium of 1Mb of RAM per machine is required to make the most of the LAN.

As yet the price is only being quoted in terms of 'nodes' – the term used to describe a single machine on the network. This price is $89.95. News of the UK launch is imminent, and *Express* will bring you the dates and the prices as soon as the information appears.

You can contact US manufacturers A&D Software on 010 1 503 476 0071. ■

Low cost number-cruncher is Acer

Acer reckons that its 25MHz 386-based 1125E computer, costing £2149, is ideal as an entry-level fileserver and UNIX host.

The built-in 128-byte cache memory subsystem also enables the PC to process large, complex Computer Aided Design (CAD) and Desktop Publishing (DTP) programs quickly and efficiently. It has 4Mb of on-board RAM while hard disk options range from 40Mb to 340Mb. Expansion is possible through one 8-bit and six 16-bit slots.

The 1125E is bundled with MS-DOS 4.01, Windows 3.0, EMM 4.11 and a PS/2-style mouse as standard. Contact Acer UK on 0753 23024. ■

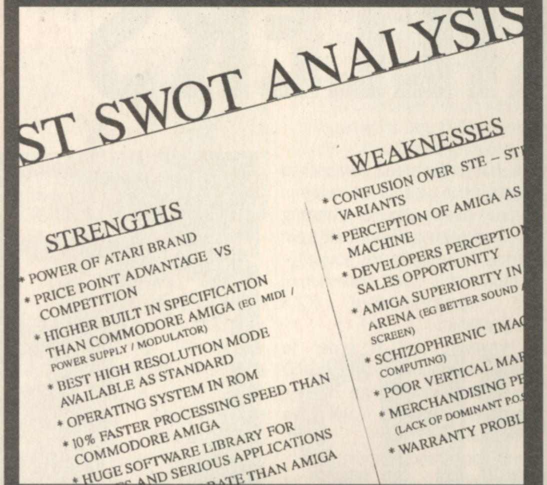
DOS 5 due in June

DOS-day is June 11. The latest version of the Microsoft Disk Operating System (MS-DOS) 5, is rumoured to include the following improvements:
- Better memory management.
- Improved compatibility with Windows.
- Undelete file facility.

However, the impending launch is being met with mixed feelings by beta testers, as DOS 4 caused much bad feeling among users and developers.

Express will be carrying out its own independent reviews in a forthcoming issue. ■

SWOT's going on?



ST SWOT ANALYSIS

STRENGTHS

- * POWER OF ATARI BRAND
- * PRICE POINT ADVANTAGE VS COMPETITION
- * HIGHER BUILT IN SPECIFICATION THAN COMMODORE AMIGA (EG MIDI / POWER SUPPLY / MODULATOR)
- * BEST HIGH RESOLUTION MODE AVAILABLE AS STANDARD
- * OPERATING SYSTEM IN ROM
- * 10% FASTER PROCESSING SPEED THAN COMMODORE AMIGA
- * HUGE SOFTWARE LIBRARY FOR
- AND SERIOUS APPLICATIONS
- RATE THAN AMIGA

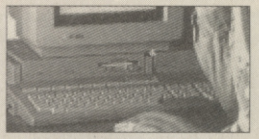
WEAKNESSES

- * CONFUSION OVER STE – ST VARIANTS
- * PERCEPTION OF AMIGA AS MACHINE
- * DEVELOPERS PERCEPTIO SALES OPPORTUNITY
- * AMIGA SUPERIORITY IN ARENA (EG BETTER SOUND SCREEN)
- * SCHIZOPHRENIC IMAG COMPUTING)
- * POOR VERTICAL MAR
- * MERCHANDISING PE (LACK OF DOMINANT P.O.S
- * WARRANTY PROBL

• Not the beast it once was: Atari's own analysis of its Strengths, Weaknesses, Opportunities and Threat (SWOT) and the ST's current market position. Depressing reading – unless you work for Commodore

Mega STE designed for Mac networking

Available by the end of July, Atari's 16MHz Mega STE, with hi-resolution monitor and either 1 or 2Mb of RAM as standard will sell for £816 and £1173 respectively, with the 2Mb version including a 45Mb, 25 millisecond Seagate hard drive. This can be removed and replaced with any SCSI compatible hard drive. Both machines will be expandable to 4Mb of RAM and run TOS 2.02. Screen modes and sound facilities will be exactly the same as current STEs but the addition of an Apple Talk local area network (LAN) port would seem to ensure additional sales as a Mac emulating machine. There are currently no plans to adopt the redesigned TT GEM desktop.

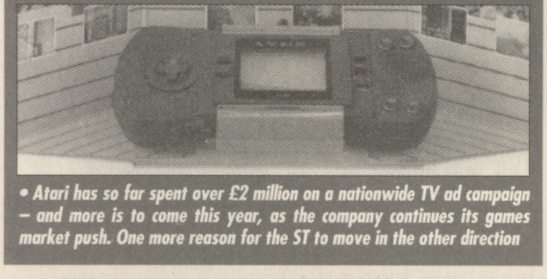


• The Mega STE: a big Mac to go – or the wrong bet altogether?

So is *this* the "year of the Lynx," then?

Atari hopes to capitalise on the success of its colour handheld Lynx games console this year with the release of a further 20 titles for the machine.

The company claims the Lynx already has the largest library of games titles of any handheld console in the UK, and forecasts games sales of 500,000 this year alone. Titles awaiting the September release include *Hard Drivin', Stun Runner, Worldclass Soccer and Ishido.*



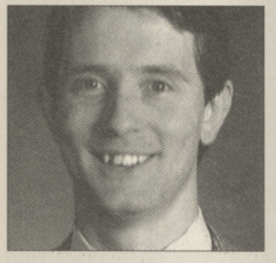
• Atari has so far spent over £2 million on a nationwide TV ad campaign – and more is to come this year, as the company continues its games market push. One more reason for the ST to move in the other direction

ALL CHANGE

Last week Atari UK called a press briefing to announce its plans so it finally confirmed what everyone has been saying all year.

This week, Atari UK announced a repositioning of its ST range of home computers, a new £299 bundle for its STE, price rises for the Mega STE, and a variety of future plans for its Lynx and Panther games machines, as well as its Portfolio and PC ranges of business machines.

Propelled by a £1.5 million advertising campaign, which is planned to run over the next six months, Atari's ST range is to be repositioned as a platform offering 'more than just great games'. Emphasis is to be placed on the machines' strengths which the company perceives to be their built in MIDI and high resolution mode. Atari finally bowed to the inevitable superiority of the Commodore Amiga as a games machine and succumbed to the ever-increasing market penetration of dedicated 16-bit games consoles.



Atari's UK marketing manager, Peter Staddon, admitted to *Express*, "The Amiga is a better machine for games, but the ST has more to offer...we're moving away from the 'wham bam thankyou ma'am', with a more serious strategy, reassuring but not alienating the kids".

But Atari's UK managing director, Bob Gleadow, remained adamant about the ST's place in the market: "We're not being competition sensitive here, it's not a reaction to Commodore".

MARKET CHANGES

It's clear though that the company is in the process of responding to far-reaching changes in the market; noting the demise of the 8-bit computers and growth of consoles as the two most prominent factors forcing it to reassess the attractiveness of its ST range.

But it's also citing a number of additional factors in influencing its decision; the current economic climate is adversely affecting the number of units sold, the increasingly lower pricing available on PCs, the number of software publishers developing first on competing systems and the loss of game playing volume to the consoles market. Its considered verdict is that it has to establish the ST-STE-TT range as a single family based on a meaningful standard, focusing on computing rather than games. As such, it wishes to move the ST towards family usage and acceptance, as well as making inroads into the educational market. To this end, one of the projected copy lines in advertising will be "Life isn't just a game (neither is our computer) ".

> "The Amiga is a better machine for games, but the ST has more to offer" – Peter Staddon, Atari Marketing Manager

> "We're *not* being competition sensitive," insists Atari boss Bob Gleadow: "It's *not* a reaction to Commodore"

NEW STE BUNDLES

Alongside a new promotional campaign targetted at national and satellite TV, the daily press, 8-bit and PC magazines, Atari is to relaunch its two entry-level products - the Discovery and Family Curriculum packs.

From the beginning of June, the 160,000 unit selling Discovery will become Discovery Xtra and offer a STE 520 with four games, three beginners' titles and several optional productivity modules for £299.

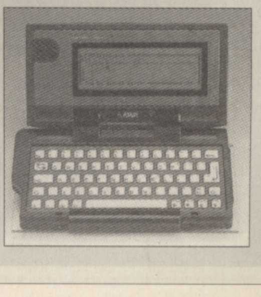
The bundled games will be Indiana Jones, Dragons' Breath, Anarchy and Super Cycle, with the Neochrome art package, First Basic and an ST tutorial disk making up the remaining titles. The planned modules, all available for £20, will include Atari badged word processor, spreadsheet, database and creativity packs.

The Family Curriculum pack, based around the 1Mb STE 1040, will cost £399 and include five software modules designed to cater for all ages from 5 to 50. Play & Learn , Junior School and GCSE Revision comprise the schooling modules, with art and design, music, programming, word processing, spreadsheet and database programs completing the bundle. ■

New Portfolios in the pipeline

The new Portfolio is likely to feature 512K of RAM and a faster processor than the existing DIP badged machine. Launch timing depends very much on the availability of 80x25 character screens which form the display of such small handhelds and some notebooks.

If prices for these screens remain high due to predicted availability shortages, then Atari plan to stay with the current Portfolio design. Otherwise the company expect to produce a PC compatible notebook computer relying on 1 and 2Mb memory cards for application and data storage.



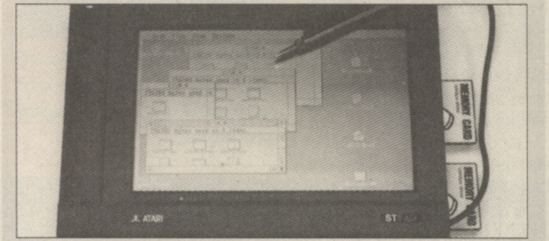
• A pocket full of computing power: the Portfolio, likely to be receiving an upgrade soon, with a faster processor and better screen

AT ATARI

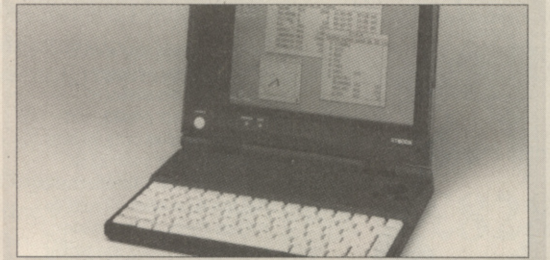
or the rest of the year and beyond. In doing
- The ST has lost the 16-bit games war.

Atari remains quiet on newest products

Released at the Hanover Fair, the pen input ST Pad is to be renamed the ST Style. Commenting on the absence of floppy drives for both machines, Bob Gleadow told Express:" We're going for the 1 and 2Mb memory card standard for the use of portable data, and we plan to release a bolt on hard disk to coincide with the official launch." The exact timing of the release of both machines is still officially undecided. However speculation from Atari UK's Managing Director Bob Gleadow sees March 1992 at Hanover as the most likely date.



• Not yet even close to release, and already the ST Pad is being renamed. Now it's the ST Style. Whatever it's called, it demonstrates that Atari's R&D department is back in business...



• As indeed does the ST Book, another gorgeous slice of pocket-sized porkiness. Start saving now for March 1992 (but don't hold your breath).

The next five years

Atari is perhaps unique in offering such a wide choice of computing products ranging from the Lynx video console to the ATW transputer machine. In between are the Portfolios, STs, STEs, TTs, PCs, and the forthcoming Panther console.

When asked which area of the company's product range would bring in most income for Atari over the next five years, Gleadow wasn't hesitant in targetting the ST, Lynx and Panther machines: "Each of these will have gained a substantial platform volume in terms of games sales. We are looking into developing our own games platform to further encourage their success, whereby titles released on our machines would only later be sold on to other competing formats" he said.

Perhaps then, Atari, at least from the personal perspective of its UK managing director, still sees games software as providing the company's bread and butter. For the moment though, despite the massive success of the Amiga over the last year, the company remains bullish.

Or, in the words of Gleadow, "We're back and we're serious".

Panther set to pounce

Although details of the Motorola 68000-based Panther console are still thin on the ground after *Express* broke the story last September, Bob Gleadow confirmed that the hardware is now finished. What exactly this consists of is still open to speculation, and he remained tight-lipped.

Express has therefore no reason to modify what we believe to be its original specification – namely, a cartridge based, 4096 colour, stereophonic console, priced at around £199. Gleadow predicted a launch sometime between October this year and January next, but stressed that this date would depend on "a critical mass of 15-20 games titles being ready for launch with the machine".

Commenting further on the console, Gleadow continued: "Wherever the Genesis (Megadrive) is, we'll be. The Panther is technically superior, but of course this market is software driven so it'll depend on the titles available.

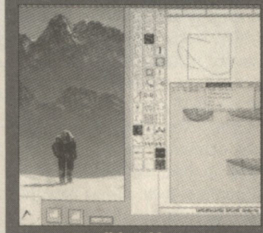
"It's now with UK developers but we have to keep the lid on it now. It would be a big mistake to age it before we ship it."

Add on Transputer

An add-on transputer card for the Mega STE will be finished by the end of the year. Bob Gleadow confirmed to *Express* that the card, a derivative of work undertaken on the Atari Transputer Workstation (ATW) project, will be called the STT, and " will sell for no more than £600 and ideally, less than £500".

Likely to be shipped with 4 Inmos Ti80 transputer chips, though capable of supporting 16, the STT will come in an Atari Megafile housing and connect directly to the 68000 bus to use the STE as a simple input/ output device.

The R&D work is being undertaken in Cambridge and is a solely UK initiative.



• Soon you'll be able to turn your STE into a transputer of phenomenal processing power

EXPRESS COMMENT

So, what are we to make of all this? The casual observer may incline to the optimistic: "Ah. Exactly what Atari should be doing. Apparently it's screwed up in a big way, and here it is admitting as much, repositioning the Good Ship Atari and sailing boldly on with a brand new five year plan. Hurrah!"

It ain't that simple, however. True, Atari is now acknowledging that, in the words of Julian Clary, "It *used* to be the leader of the pack; and now it's not. You get the picture? It *was* the leader of the pack, now –" *(that's enough camp old '50s retreads – Ed).*

Trouble is, we've heard this all before, and more than once. Remember the STE's original launch back in the autumn of 1989? How it was going to give that nasty old Amiga a *jolly good hiding?* Didn't turn out quite like that, did it?

Still, perhaps we should let bygones be bygones. Clearly Atari has at least decided that Something Must Be Done. In effect it's giving up the fight on games – though off the record it continues to insist that it has an important future in this market, if only because it offers software houses the opportunity of a cheap second format to help recoup investment in Amiga development. (Why software houses insist on turning their back on such a prime money-making opportunity is beyond us.)

Instead, the Good Ship Atari is sailing for virtually uncharted waters. The company has spent years squandering its single biggest strength, the ST's virtually unchallenged supremacy in the vast and incredibly aspirational MIDI music market.

Despite most acts on *TOTP* (greetings pop-pickers) plonking out their wretched "tunes" on the ST, Atari sat back and did absolutely nothing with its biggest selling point. And when it eventually decided to "get with it daddio" and sponsored a "major musician" to promote that side of things, it chose a *Julia Fordham*, whatever that was.

Despite our natural fresh-faced optimism and youthful naivety, we're not convinced. At best this is little more than a promise.

Some commentators and runes-readers claim to have discerned a new mood of determined realism emanating from Slough. Maybe so. But there's a long way to go yet. One thing is clear, however: this is the company's last shot. They mess this one up, it's goodnight Atari.

NIBBLES

Whizzer chips

After AMD's successful legal tussle with Intel over the rights to manufacture 386 chips, Atari has decided to launch a range of 386 PCs using AMD processors in the second half of this year. An Atari notebook PC could well be one of the products due for release.

Phone your PC

A Japanese designed remote control device enables you switch on your PC over the phone without adding a penny to your phone bill. The Yucomp RSW-800 is a small black box that connects to a modem. It sells in Japan for the equivalent of £150. Yucomp is currently looking for a European distributor.

Database shrinker

Brubaker's Worksheet Optimiser, which removes unnecessary information from worksheets and reworks formulas to make them work faster, is now available for both Lotus Symphony and 1-2-3. Brubaker claims that it can reduce the size of a typical worksheet by 12 per cent. It costs $99.95 in the US.

Mini modems

Two portable modems designed for use with laptop computers have been launched by Microcom. Weighing seven ounces and about the size of a video cassette, both connect to PC and Macintosh computers. The 542 model at $449 is for use with dial-up phones while the 1042 at $649 can be used with cellular phones.

NEC's DRAM

NEC is to produce 16-megabit dynamic random access memory chips (DRAMs). A new US-based plant will go live in 1993, and is expected to cost up to $370million to build. The company is predicting monthly production of 1.5 million chips. The action is designed to reduce trade friction between the US and Japan.

Networking in Windows

The latest upgrade of Crosstalk for Windows, version 1.2, now has network support. This allows users to communicate through shared modems on a network meaning that only one high-speed modem per network is now needed.

NIBBLES

286 upgrades
Two new 20MHz 'snap-in' 386SX-based replacement boards launched in the US will make multitasking and OS/2 applications possible on 286 machines. The board from Intel has 16K of onboard cache while the AOX board will also run at 16MHz. Both cost around $500.

Oracle card
Oracle will launch a card next month which will allow Windows users to manipulate data from Oracle databases. It will also allow for the addition of graphics. It is expected to cost around £300.

Amstrad laps top place
Market research figures for March show Amstrad leading in the laptop. The company's market share rose by 4.3 per cent, 5 per cent ahead of it s nearest rival Compaq.

CAD in Windows
AutoCAD 11 is set to be released in a Windows compatible version early next year. The Windows Extension Kit to AutoDesk's powerful design program will be able to run under Windows 3.0, in DOS or in both simultaneously. Price has yet to be announced.

Support CD
ICL is releasing a set of three CD-ROM discs built up from years of collected knowledge from ICL support staff world wide, PC-Paris will be accessible through Windows. It will be available in three versions; one for VME – ICL's own mainframe system) , one for Unix and another for PC systems. Available now, prices range from £2,000 for a year's subscription for a single disk. to £5,000 for all three disks. The ICL Open Line is on 0344 711711.

Tape prices rise
If Tokyo tape manufacturers win a dispute with the EC, the result could be cheaper games for Spectrum, CPC and C64 owners. The EC is set to bring in laws to stop the Japanese from flooding Europe with cheap audio cassettes – the result of a downturn in consumer demand in the East and the US. However, the Japanese are threatening to stop investing in the EC if the laws are imposed.

Correction
The price for *Timeworks Publisher* in the May 4 edition should have been£139.99.

Graphics net set to take Amiga into corporate market

AMIGA: IN AT THE HIGH END

Commodore is aiming to take the Amiga into new areas of corporate business with the help of a Norwegian multi-media package.

InfoChannel, from Digital Vision, is a graphical network system which runs on Amiga 2000s and 3000s. It allows complex series of textual and graphical screens to be designed on a central Amiga 3000 and then transmitted to slave Amigas to be shown on in-house television systems.

It is already being used by a number of companies in Europe, including a cable television station and Scandinavian Airlines. Other applications include point of sales display material for chains of shops, where a marketing department would design display material and then send the information to satellite Amigas at local shops.

The system was designed specifically for the Amiga because of the machine's graphical capabilities and its direct compatibility with both the Euorpean PAL and American NTSC television standards.

Both Commodore and Digital Vision believe that the system will raise the Amiga's profile as a business computer.

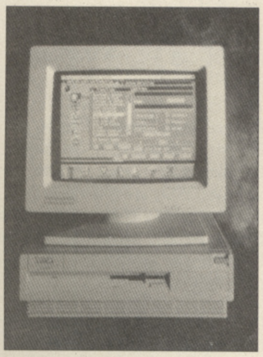
"We see it as a high-end corporate market system," Dennis Phillips of Digital Vision UK told *Express*. "We're don't want to encroach on the IBM PC market, but we're showing the company a system where the Amiga is the best computer for the job. It's going to take Commodore into corporates they never thought they'd get into."

According to Phillips, many leading UK companies are already showing interest, including Thorn EMI and British Airways. A major contract is expected to be signed within the next two weeks.

Phillips also believes that the system will appeal to busy companies because it is easy to install and exceptionally user-friendly. He reckons that it only takes half a day to have the system installed and another half a day to learn how to create stunning presentations.

"It's one of the easiest programs to use on the Amiga. It uses no computer terms whatsoever. I gave it to my nanny, who knows nothing about Amigas, and after a couple of hours she came back with all the stuff she had done," says Phillips.

The cost of the system varies with the kind of setup required, but on average the central software and materials needed to link one central Amiga to one satellite machine costs £1,200.



• Digital Vision's InfoChannel multi-media network system: the most user-friendly productivity program ever written?

The *Infonet* software required to set up a network costs £1,200 and then each satellite unit will cost a further £900 to install. ■

Soaraway space sculpture

Huge space sculptures orbiting the earth are just part of the plans being made by the International Society for the Arts, Sciences and Technology (ISAST), for International Space year in 1992.

Among other projects planned are massive earthworks large enough to be seen from space shuttles and designs for zero gravity habitats.

The organisation also covers such subjects as robotic choreography, holography as an art and musical interfacing with the human nervous system. *Express* will be carrying a full feature in issue 139. ■

Two more 1-2-3s

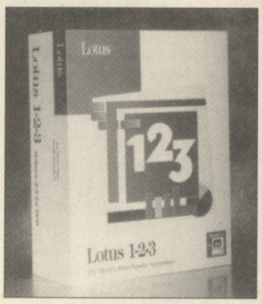
Lotus is releasing two upgrades to its popular *1-2-3* spreadsheet.

1-2-3 Release 2.3, at £395 offers advanced graphical capabilities. New features include being able to use more than 100 type styles on a single spreadsheet, drop shadows, a built-in mini wordprocessor, a palette of 224 colours and automatic text wrap around.

The more refined package is Lotus 1-2-3 Release 3.1 Plus, an upgrade to version 3.1. Priced at £475, it offers many enhanced features including 3-D multi-page worksheet capabilities, access to external data via DataLens and virtual memory to allow for spreadsheets using up to 64 megabytes.

It also includes a facility called Solver which can help to analyse complex problems which might arise in a particular spreadsheet.

Upgrades for existing users are £99 for both releases. Lotus can be contacted on 0784 455445. ■



• Aiming to extend a user base of 14 million Lotus releases two new upgrades of the 1-2-3 Spreadsheet.

Cheap designs with classy style

• What you can do with text in Avagio 2 runs rings around other sub-£200 DTP packages.

***Avagio* has been upgraded to offer PC owning desktop publishing users advanced features. Colour printing, text runaround and an extra 90 fonts are available for under £150.**

Enhanced hinting facilities mean that font sizes below 12 point do not lose clarity. Faster screen updating and cutting and pasting speeds up page design. Text can be made to run around objects or rotated to angle angle.

You cannot actually work in colour in *Avagio*, but colour can be added to a design so that it prints out in colour, or can be exported to other colour programs.

The upgrade will include 90 new fonts as standard, but user will be able to increase this to over 200 with a series of 'font packs' to be released weekly this summer. Ranging in price from as low as £6 each, every pack will contain two new fonts.

***Avagio 2* is available now for £140. Contact LTS on 0386 792617. ■**

Laser printer ST style

ST owners can not use the Hewlett Packard LaserJet or compatible printers – or at least, not until this week.

Software Development Systems (SDS) in the United States claims to have solved the compatibility problem with its Deskjet Utilities Pak (sic). This runs alongside existing ST word-processing software. It uses 9K of memory, and is able to take advantage of the ST's new control panel. It also supports Degas *Elite*, *MacPaint*, and GEM.IMG formats.

The price has not yet been announced. For more information you can call SDS on 010 1 213 595 9799. ■

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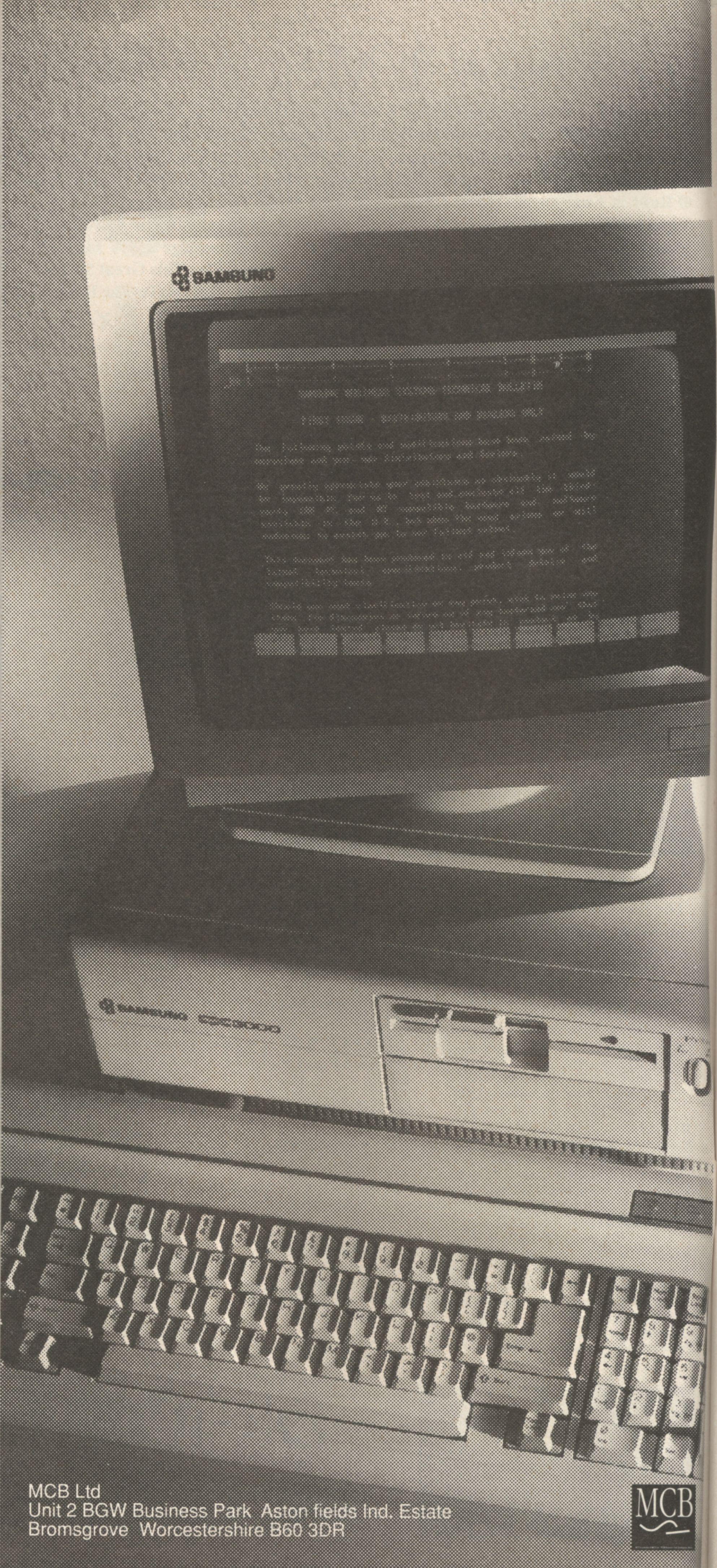

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WHAT'S NEW

The definitive low-down on all the latest product launches as they're announced.

Smashing server

PRODUCT: File server/ PC graphics workstation
NAME: Elonex PC 486V/286E

• Fast, flash and more than a networking file server. What might this system offer you?

Claimed by Elonex to be a powerfully fast UNIX running workstation and/or file server, the 484V/286E comes with either 1,4, or 8Mb of cache memory via a 32-bit SCSI controller. This is said to offer a sustained data transfer rate of 25.6Mb per second. The heart of the machine is a 32-bit EISA data bus. The standard entry level configuration comprises 4Mb of RAM, fast access 100Mb hard disk, monochrome monitor, mouse, MS-DOS 4.1,Windows 3, a 1.44Mb 3.5 inch floppy drive, one parallel (Centronics) and two serial (RS232) expansion ports. It can also be configured as a Novell NetWare 3.11 server using a 32-bit Ethernet card, 32-bit SCSI controller, and 300Mb SCSI disk - this version will set you back a hefty £10,750.

Peripherals for this system include tape streamers, up to 1Gb (gigabyte = 1,000Mb) hard disks, the XV17 non-interleaved, 1280 X 1024 colour monitor (£875.37).

Price: (Entry level) £4,079.97
Availability: Now
Target users: Anyone who needs powerful netware or UNIX systems. Also ideal as a high-end CAD/graphics system.
Contact: 081- 452 4444
Perceived competition: Dell computers and Compuadd with their 'high cost' work stations

Video ASCII

PRODUCT: Video display terminal (VDT)
NAME: Tatung ET series

There are three terminals in the Tatung ET series; the ET10, the ET10-20 and the ET 10-80 all of which are 14", monochrome - either black and white, or black and amber. ANSI, ASCII and PC Term VDT protocols are also available.

The screen resolutions are as follows:

ET10	25 X 80 (pixels)
ET10-20	26 X 80
ET10-80	44 X 132

The screen refresh rate for all ET VDTs is 70Hz which compares well to the average 60Hz found on the standard 14" VGA monitor. Four keyboard configurations are available: IBM PC/AT, IBM enhanced AT, DEC VT220 and Data General DG D211.

Price: ET10 = £433.57
ET10-20 = £457
ET10-60 = £504
Availability: Now
Target Users: Business and system designers
Contact: Tatung on 0952 290111
Perceived competition: The spokesman for Tatung was not prepared to say.

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PRODUCT: Data communication catalogue
NAME: Comcat

This is the tenth edition of Trend Communications catalogue for users of data communications equipment. The first point to note is that it's free. The next is that there are over 700 products listed within the pages. These include cables and connectors, switching devices, modems, multi-plexers, fibre optics, limited distance comms, interface converters, local area networks (LANs), wiring products, PC and terminal related products, and multiplexers. Each product is described and illustrated with 16 colour pages of new products.

Price: Free
Availability: Now
Target users: Anyone who uses computer data transmission.
Contact: Trend Computers on 06285 30611
Perceived competition: None

Publish domain

PRODUCT: Desktop publishing for UNIX systems
NAME: *Avalon Publisher*

This piece of product news came our way purely by a chance conversation. *Avalon Publisher* is aimed directly at the Elonex PC 486V/286E (see Smashing server). According to the publishers, Avalon is 'a low cost solution which brings professional results'. Express will be giving the software a full review in a forthcoming issue in order to test these claims.

Price: £1051.60
Availability: Now
Target users: Anyone wanting a word processor to create professional layout work.
Contact: Micro Muse on 071-352 7774
Perceived competition: *Framemaker* (£2,000)

Low cost laser

PRODUCT: Laser printer
NAME: Mannesman Tally MT904

• The Mannesman Tally MT904: a budget version of MT's laser printer range is now available. How much? Read on...

This laser printer is a recent addition to the market, it's two months old, and joins Mannesman Tally's range of MT906PS printers.

As an introductory offer, the manufacturers are selling the printer for £821.32. It is a 4 pages per minute printer which comes with optional PostScript compatibility gained via the addition of add-on emulation cards. It comes with resident courier fonts and a range of Hewlett Packard compatible fonts. Its main emulation is the HP LaserJet II printer. Optional memory is available at £197.92.

The more impressively specified MT906PS printer comes with 2.5Mb of RAM as standard, PostScript page description language compatibility, and 35 Type 1 Bitstream fonts. It is capable of producing 6 pages per minute and makes use of Mannesman Tally's JADE controller. This uses a NS32CG16 15MHz processor, as well as a custom Application Specific Integrated Circuit (ASIC) which does the jobs of over 200 separate integrated circuits which were previously on the main board of MT printers. It also comes with parallel (Centronics), and serial (RS232) ports for interfacing with a wide range of IBM compatible computers.

Price: MT904 = £2159.65. Currently on special offer of £821.32
MT906PS = £2231.32
Availability: Now
Target Users: DTP and graphics applications.
Contact: Mannesman Tally: 04994 450270
Perceived competition: Laserjet II and 8ppm laser printers.

Sparc plug

PRODUCT: SPARC Workstation
NAME: The Muse ix 2000

SPARC (which stands for Scaleable Process ARChitecture) is a system developed by Sun computers for use in its high-end workstations. The Muse ix200 from Micromuse which makes use of SPARC is based on the platform of an Opus station, it is 100 per cent Sun compatible machine which comes in three configurations:

12.5 million instructions per second (Mips)
18 Mips
Laptop version of 12.5 Mips.

All the machines are aimed at companies, or wealthy single users who wish to extend existing SPARC-based systems or move into the world of SPARC without the massive financial layout previously associated with this type of architecture.

Price: 12.5 Mips desktop = £6104.12
18 Mips desktop = £4694.12
12.5 Mips laptop = £7866.62
Availability: Now
Target users: Anyone who wishes to make use of highly-specified, 100 per cent Sun compatible workstations.
Contact: Micromuse: 071-352 7774
Perceived competition: Sun workstations.

Please note that all prices quoted in this page are inclusive of VAT.

MonSTer News

Just a couple of weeks now since the release of the MONSTER STEREO CARTRIDGE, and it is already establishing itself as the industry standard on the ST. There is already a wealth of public domain and commercial software supporting it, and the number of new commerial titles supporting the cartridge is growing by the day. For full details of the special offers we have on MSC compatible software, check out the advertisments in this magazine.

TCB TRACKER

There have been a number of people enquiring about the update to TCB TRACKER

To put everyones mind at rest, I can publicly announce that the latest version is 1.1m. This is just an updated version of 1.1 that supports the MONSTER STEREO CARTRIDGE. The latest version will in the words of Anders Nilsson "BE READY SOON". We will be sending out a letter to everyone who has returned their registration card when we actually receive the new version.

PD UPDATE

Have you got a copy of the latest MPH ST PD list yet? If not then you don't know what you are missing. Our list is double sided and not only contains details of all our PD software, but also several useful utilities like our virus free boot. To receive your copy, simply send one pound to MPH and we will send you a list + discount voucher.

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EXPRESS MAIL

Write and tell Haydn Fitz-Williams what you think! Reach him at: *Express Mail, 30 Monmouth Street, Bath BA1 2BW.* Sorry, no personal replies, even with an SAE and remember, only SOME letters win a fiver!

Ahoy there!

I feel that as a software liberator, that it's about time I spoke up for our profession.

Firstly, I wonder how much exactly you have made from all the software liberators you shop to FAST?

Secondly, I don't think you do as you say. I am sure you and your colleagues must have touched and probably use liberated software, as you imply to your readers that you have nothing to do or have had nothing to do with such software. Remember H F-W that it is people just like you that we supply.

Thirdly. What is exactly wrong with harmlessly copying software? All it does is reduce over bloated profit margins by a couple of percent and it keeps us from begging on the street for money to buy games with - what's better H F-W? I leave it to you to decide.

"A poor software liberator"

OKAY let's spell it out shall we? First off, we don't make money out of shopping people to the Federation Against Software Theft. Second, we don't need pirated software because, as reviewers,we get every single release for nothing anyway. Third, it'd be better for you to beg on the street- it would show you how hard it is to get money out of people. 'Software Liberator' indeed - get outta here!

You too

I noticed that Anonymous pirated nearly £16500 of games. You seem to think this is the equivalent to him stealing such games. But copying is not theft. If you steal something you yourself have that thing while someone else is deprived of it. The original is still intact after being copied.

It could be argued that by copying games Anonymous has deprived the software industry of the chance to sell him those games, and so depriving them of money they wouldn't have got in that way, but if he wasn't going to buy then anyway then no harm will have been done.

Since it is extremely unlikely that a sane person would lay out £16500 on games he has really done no damage to the software industry whatsoever. Your argument is therefore nonsense.

Deathbringer 90

ABSOLUTE CRAP. Of course, pirates want the games they copy! And if they didn't have the opportunity to illegally copy them they'd have to buy 'em. Pirates copy games because they don't want to part with money. £16500 of pirated games is theft pure and simple because the pirate is depriving all the parties involved in bringing the game to market of the money they deserve. That's all there is to it.

Cheap games

I would like to add two points to the piracy debate. Firstly, I read that many pirates copy 16 bit games because the price tag is too high and they would not do it if games were the same price as 8 bit games.

A quick scan through Amiga Format reveals that games for sale under a tenner include Kick Off, Shadow of the Beast, Damocles, X-out (for £6.99) and so on. I rarely fork out more but even then Lemmings only cost me £17 on the release day. Alright, you may have to wait a few months for bargains, but I managed to hold my excitement and purchased Xenon 2 for £7 a few months after release. These thieves are either liars or illiterate.

N A Crooks Middlesbrough,Cleveland

Precisely.

Riscy BIZ

There appears to be a bit of confusion over what constitutes a RISC chip. When Reduced Instruction Set Computers were first developed by IBM, it was primarily to increase processing speed. This was achieved by reducing the time spent decoding the instruction, and the theory was that the fewer the instructions, the quicker the decoding.

Technology intervened however and as instruction coding rapidly speeded up, the reduced instruction sets which gave RISC chips their name were no longer necessary. The general definition of RISC now is a processor where instruction decoding takes approximately one clock cycle.

☎ On-line mail

Own a modem? Then squirt us a letter. *Express* has its own conference on CIX. Why not give this on-line service a ring on 081-390 1244 and talk to us direct! You can also leave E-mail for us on Prestel and Micronet - get in touch on 011112623, or on Telecom Gold @84:txt152

MORE ASTONISHING LOOT ATTRACTION UTILITIES - PARTS 3 & 4

3 Write a basic program full of GOTO loops that calls up pages full of adverts.

If you live in a terraced house, you can put your monitor up to the window and catch the attention of passers by.

If you live at a bus stop, you'll be able to increase the rates you charge advertisers.

If you aren't lucky enougth to live in a terraced house and have a long front garden but are still blessed with a bus stop, you'll be able to rent seaside pier telescopes in the winter and place these just inside the garden wall.

The smaller amount of ad revenue you make will be supplemented by the pennies that people put in the telescopes.

If you're a real entrepeneur, you'll make the program run slightly longer than the telescope thus guaranteeing a second coin.

And who said making money with a computer was difficult

Quentin Peel, Birmingham

• Do you own a CPC? - Well bury it now and make a fortune

4 Here's several 'loot attrtion utilities' for making stacks of cash with your computer

1) If you have a CPC. Put it in an hermetically sealed box now. In one hundred years time the Science museum will pay thousands for a mint condition relic such as this.
2) If you have an MSX machine, phone Sony as they are bound to want to get all of these bad mistakes out of circulation as soon as possible.
3) If you have a Mac, move to London and tell some pony-tailed MD of a design house that you are "DTP literative on a life-knowledge interface scenario".
4) If you own a PCW, hire your services out to a circus, they always need clowns.

J Sands, Southampton.

From this it is possible to have the seemingly absurd situation which Stuart Wrigley referred to in issue 131, where a RISC chip has the entire instruction set of a CISC chip as a subset of its own, or emulates such a set at the microcode level. The situation with Motorola's new chips though may be simpler than at first appears. The 68040 has been referred to as 'almost' a RISC chip, due to the fact that its instruction decoding takes less than 1.4 clock cycles on average. The new chips may simply extend this 'RISCness'.
P.S. I am a poor computer science student - how do I go about submitting articles for possible inclusion in your austere organ?

Geoffrey Taylor, Dundee, Scotland

THANKS GEOFF for that info. If you, or anyone else for that matter, want to submit articles for possible inclusion in Express you're best off sending the editor a summary of the piece. This should outline the main points of the article, the proposed length and how it can be illustrated. Don't send an SAE, phone Andy a few days later and talk to him directly. He's quite a friendly chappie really.

Arc lights up

As an ST owner, I was totally disgusted with Mr Daveys 'Review' of the different front ends.
Anyway, after sifting through the rubbish, I felt that the best machine was...the Archimedes. However, although outclassing most of the others in most things, it was felt that lack of software meant it couldn't be recommended. This was exactly the same as your 'Amiga/ST' comparison a few years ago. You said the Amiga was excellent, but you recommended the ST because of software.
Care to do an HONEST STE, Amiga, Archie, Comparison?

Anonymous

WHAT ARE you rabbiting on about? All the reviews in Express are honest - we have no affiliations with any third parties. We'll be doing a three-way head to head in the not too distant future. Want to take a guess now which machine's going to win? **Clue:** It won't be the Archimedes.

Gratuitous?

The article portraying the picture of the exploded Challenger shuttle was indeed tasteless and somewhat irrelevant to the advertised product. (It was a news article actually - H F-W)
When you advertise a new flight simulator you do not show a photograph of the Lockerbie disaster or publish images of the M1 tragedy, why should a space shuttle simulator be any different?

Mr R Smith and Mr J Vaughan
Newarke Close, Leicester

THIS SUBJECT appears to have generated more correspondence than any of late. I apologised last week and pointed out that some people find black humour funny. Obviously you're not one of them so how about taking this fact on board?

People die all the time, it's the biggest fact of life. And one which some of the more enlightened among us learn to live with by not treating it so damn seriously.

Guilt complex

Regarding your jokes about the heroic NASA astronauts, I would like to say that you are not big...and you are not clever. My brother was an astronaut and he was killed in the war. And he was a spastic. So I hope you feel good about it, as I certainly don't.

Anonymous

I'M VERY SORRY that I may have caused you, or your dead spastic astonaut brother, offence.Personally, I don't believe he ever existed.

Atom power

I read that Insoft are marketing the Recall system for £595. I have had a somewhat similar system for years, which only cost a few pounds.. This is the "Disatom" chip on my old Acorn "Atom" computer. One just types FIND "whatever" and the whole item containing the word appears on the screen. My old "Atom" with its Olivetti disk drive is the best computer I've tried! Is there anyone else out there still using one?

Mr A E Gildersleve, London

☎ What a bind

I'm sure you lot at NCE have heard of Amiga Shopper? Y'know the new magazine by Future Publishing? Yes? Good, now if you pick up a copy of issue two, and turn to page 111 you will find an offer to take out a subscription and also order some binders to put your vast collection of Amiga Shopper back issues (all two of them) into.
Now why is it that this new magazine is already offering binders after only two issues but New Computer Express (also by Future Publishing) has yet to offer its readers binders even though it has been in existence for over two and a half years? I think we, the readers should be told.

Matthew Owen Bromley, Kent

BINDERS are available from Future Publishing, The Old Barn, Somerton, Somerset (0458 74011). They're £5.95 - but hurry there's only 100 left!

A new car

Okay Mr Haydn Fitz-Williams that does it. I have just about had enough of your complaints and snide remarks, just what is wrong the Fiat Uno.
It is a very good car, economical, roomy inside, yet small on the outside, reliable and, if you remember, was voted car of the year when it was released. Maybe it's just the diesel version that you don't like, well if that's the case then I will gladly swap my trusty 1100 for your diesel any day. If you don't like the car then why did you buy it in the first place?

Peter Mead Wallington, Surrey

• Yep readers I sold the Fiat Uno so I could afford a full page monitor for my Mac IIFX -

TOO LATE I'm afraid. I flogged the Uno some weeks ago and bought myself a battered 1969 BMW 2002Tii. You'll be pleased to know it can start from standing in fourth gear with 4 passengers on board. Almost as much raw power as my MacIIFX, and Jeez does it belt along - anyone got any spares?

Pure GEMs

I hope I may add my prejudices to those of your other correspondants concerning WIMPs and GUIs. Stewart Russell was right on with saying Suntools is not the best of GUIs. On top of its tiny arrows, multiplay nested popup menus and three buttoned mice with different functions for each button, I was amazed when I compiled a C program to print "Hello World" in a window - the program took up 550K!

As far as the ST is concerned. as I understand it the reason GEM was so bad was because Apple wanted it that way. They patented the idea of turning a trackball upside-down, of rubbish tins (GEOS for the C64 had to be changed) etc. Thus GEM had drop-down menus and a limit of 4 windows. I also heard that future versions of GEM on the PC were not allowed to have overlapping windows!

Carl MullerTolworth, London

Sexist crap

I feel that I really must write to complain about the sexist innuendo that seems to be creeping (that being the operative word) into what has always been a fine publication.
I actually have never owned a computer myself and know almost nothing about the computer world. I was introduced to your magazine by a Mac owning friend and fell into the habit of buying every edition.
Unfortunately I shall no longer be doing this as, to my mind, the magazine has sunk to the very depths of Bohemian depravity. Headlines such as the one on page two of issue 132 (CAD gets the human touch) page three (appropriately enough) Bush pushes the button and page 8 (CDTV:The extras) are not clever, they are vulgar and facile and highly demeaning to all women.
I have no doubt that the entire staff of New Computer Express must be made up of filthy middle aged men in raincoats whose ignorance is so deep-seated that they are utterly incapable of writing articles without resorting to their most basic of instincts.

Ms R Ramshaw Nottingham

Dolphin Love

I read with some amazement the other day about the man who was up in court for having sex with a dolphin. It set me wondering, are there any readers out there who've had sex with their computer?

Mark Bennett, Exeter Somerset

• Freddie, the naked dolphin at the centre of the current court case pictured in his hotel pool

PHEW... now there's a new angle. ■

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AMIGA

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- **3-D gets even more animated in *Professional* upgrade.**
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AMIGA C EXPLAINED

If the C programming language leaves you completely mystified, then no doubt you'll be interested in a new book launched by Bruce Smith Books, publishers of the well received range of *Mastering Amiga* titles.

Badged as a 'complete C learning course', *Mastering Amiga C* is the third release in the *Mastering Amiga* series. It is bundled with the Charityware C Compiler, NorthC, and is great value at £19.95; a complete C programming environment and all the information you need to use it for, less than the price of an average Amiga game, sounds too good to be true!

The book has been written by Paul Andreas Overaa, a freelance journalist who has made his name on such publications as Future's own *Amiga Format*. Paul has been writing about technical aspects of the Amiga ever since its release, so you can be sure that he knows a thing or two about his chosen subject.

The books starts with an in depth look at the basics of programming in C, including types, operators and expressions, input and output in C, structures, data types and pointers etc. Once the basics are dispensed with, there's a look at Amiga specifics.

As well as complete documentation for the bundled NorthC compiler, the book also includes an indepth look at both the Lattice/SAS compiler and the Manx Aztec compiler.

☎ Bruce Smith books is on 0727 41243.

MORE BOOKS...

The three *Mastering Amiga* publications from Bruce Smith are only the first in a long line of books which the prolific publisher wishes to bring onto the market. Titles due for publication this year include *Mastering Amiga Beginners, Mastering Amiga Printers, Mastering AmigaDOS Scripts* and *Mastering Amiga System.*

Also planned are titles covering such subjects as machine code, BASIC programming, disks and hardware.

3-D PRO UPGRADED

Fans of Progressive Peripherals much criticised *3-D Professional* will be pleased to learn that a major upgrade is on the way.

Version 2 of *3D Pro* boasts much faster operation, a better scene editor, the ability to import 24-bit backdrop images (about time too), improved animation tools and much more besides. Expect to hear more soon...

TOP TEN TIME

I have received a letter from a Peter Whitehouse in Manchester. Peter has just taken the plunge and treated himself to an Amiga 1500 system which he bought both for his personal use and for his three kids.

Knowing how great the Amiga is for games, Peter wants to know which games are worth buying. With so many good games available, I thought it would be a better idea to present my 'top ten' Amiga games of all time. Obviously there are many more worth buying, but this little list should give you an idea of some of the goodies available.

Lemmings (Psygnosis) – No list of Amiga games would be complete without Dave Jones' classic *Lemmings*. It's only been available for a matter of months, but already it has gone down in history as one of the all time greats.

SideWinder (Mastertronic) – Originally launched as a budget title, Mastertronic's *SideWinder* is a shoot–'em–up like no other. It's fast, it's frantic and it's extremely violent. What more could you ask?

Dungeon Master (MirrorSoft) – You don't need to be a role playing fanatic to enjoy this dungeon exploration game. You guide a team of four adventurers into a dark, dank dungeon, picking up treasure and killing monsters along the way. Totally absorbing.

THE 'NOT THE PD PICK OF THE WEEK'

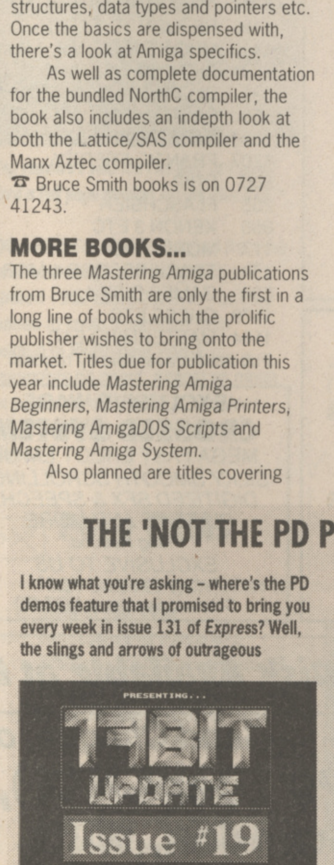
I know what you're asking – where's the PD demos feature that I promised to bring you every week in issue 131 of *Express*? Well, the slings and arrows of outrageous publishing deadlines (and my laziness) have done their worse again, but I promise to continue the series in next week's issue.

In the meantime, Seventeen Bit would like me to let you all know that it has dropped the prices of its disks. Down from £1.50, you can now experience the ultimate in PD demos for just 89p!

On the subject of all things Seventeen Bit, I must take this opportunity to plug its *Newsflash* disk magazine, expertly put together each month by everyone's favourite bitter drinker, Martyn 'mine's a pint' Brown.

As well as the usual helping of decent utilities and demos, the *Newsflash* magazine is full of humorous articles and news.

☎ Seventeen Bit is on 0924 366982.



• The Newsflash *disk magazine from Seventeen Bit is essential reading for all Amiga enthusiasts.*

Kick Off 2 (Anco) – The ultimate footy game on any micro. It's fun played against the computer, but it's a real cracker when played against a human opponent. Even if you hate football you'll love *Kick Off 2*!

Sim City (Infogrames) – Have you ever wanted to be the mayor of a city? In *Sim City*, you are just that, making decisions that every good mayor must take. Your skill and judgement will directly effect the fortunes of your computer generated city. Won awards for educational value but don't let that put you off.

Lotus Esprit Challenge (Gremlin) – Not since the days of Epyx's *PitStop 2* on the C64 has a driving game been so damned playable. I must admit to being a bit of a boy-racer on the quiet, so *Lotus Turbo Esprit* really appealed to me.

F29 Retaliator (Ocean) – It may be rather bugged, but there's no escaping the fact that *F29* is really good fun. Fly your high-tec jet fighter into the thick of battle, cannons a blazin'.

Great Giana Sisters (US Gold) – Make no mistake, *Great Giana Sisters* is a blatant rip-off of the arcade classic *Super Mario Brothers*. If you've played *Super Mario*, then you'll feel instantly at home with this finely tuned and brilliantly implemented platform game.

Battle Squadron (Discovery) – Another absolute classic shoot-'em-up. The vertically scrolling game format may be rather dated, but the action doesn't come much hotter than this. Prepare to be frustrated!

Rainbow Islands (Ocean) – Definitely Andrew Braybrook's finest hour. In this brilliant coin-op conversion, you must save the *Rainbow Islands* from the meanies that infest them. Platform action at its best.

JOYSTICK CHOICE

Staying with Peter's letter, he also wants to know which joystick I would recommend. Well, this a case of personal taste, but I personally own two Konix Navigators which I think are great.

I've used a fair few joysticks in my time, but nothing even comes close to the amount of control and comfort that the Navigator delivers.

Jason Holborn

ST

- **3-D crop-dusting action from *Command* team.**
- **No more monitor swapping blues with *Monulator*.**
- **Superb sounds from a super new 16-bit sampler.**

DUSTER COMMAND?

Remember when the storming *Carrier Command* first appeared on the ST? Its brilliant blend of strategy and arcade action took the games world by storm. In fact it could be argued that it was one of *the* best games ever for the ST.

The software development company responsible for it, Realtime, followed it up with a tank game called *Battle Command* which proved that it was an innovative company with refreshing ideas about games design. The good news is that the team is working on a new title called *Duster*.

This new game – a combination of 3-D filled vector graphics and a management section – looks certain to follow its two predecessors to the top of the charts. You control a crop duster who has to combat a plague of virulent nasties. However, the interesting aspect of the game's development is that it is the result of a collaboration.

Rowan Software is the team which brought you the ST versions of the *Falcon Mission* disks and the awesome *Flight of the Intruder*. It has joined forces with Realtime to get *Duster* onto the shop shelves. Mirrorsoft reckons that the game should be ready for an Autumn release. This is one games reviewer who wants an early copy.

Hi-Res TV

One of the enduring problems associated with the ST is its screen resolutions. I mean it's all very well having three versatile resolutions at your disposal, but when you have to change monitors to see all three, life becomes a bit of pain. This is no doubt why monochrome emulators have proved such popular titles in public domain libraries.

However, professional software houses have looked at the situation and decided that they can improve on the free versions.

The Monulator from Moriarty Software is the first hi-res emulator to appear commercially. The company claims that its emulator enables an ST running a colour monitor to display high resolution graphics with no loss of display quality.

Monulator runs 80 per cent faster than the public domain program *Mono_emu* and displays all 256,000 hi-res pixels. The software is user-configurable via a desk accessory program. The program, which is compatible with all STs, uses a special scan mode to display crisp text, boosting speed by over 30 per cent.

Release date for the *Moriarty Monulator* is the beginning of June. It will be priced at £19.95.

☎ Moriarty Software is at 55 Burns Road, Pound Hill, Crawley, West Sussex, RH10 3AT. Tel: 0293 539215.

16-BIT SAMPLING

Whatever the depth of your pocket, there's a sampler to match. In fact at the last count there were at least ten different samplers available for the ST ranging from £20 right up to £250. But if you're serious about your sampling hardware then the perfect piece of kit has arrived for you.

Audio Visual Research released the highly acclaimed Pro-series 12-bit sampler almost a year ago. We've heard little from the company until recently when its 16-bit sampler was

(continued on next page)

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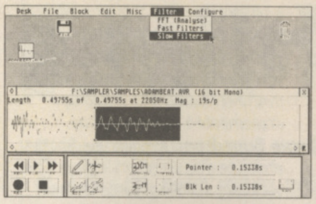

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Length 0.49755s of 0.49755s at 22050Hz Mag : 19s/p
Pointer : 0.15338s
Blk Len : 0.15338s

• The new 16-bit sampler from Audio Visual Research features a user-friendly Mac-like front end and some intuitive editing facilities which allow for very precise changes.

announced. I've now acquired a pre-release version and what can I say but, 'it's wicked'.

The front-end software for the sampler has been completely re-designed to be as flexible as possible. The immediate aspect that strikes you is the Mac-like layout. At the bottom of the screen are a series of tape control influenced icons. In the middle of the screen is the graphic representation of your sample and at the top of the screen are some Mac-like icons.

You can load in as many samples as your memory will permit, with each having its own icon at the top of the screen.

The editing functions are very intuitive indeed. Chopping, joining and splicing is as easy as putting the pointer in the right place. What's more, to allow for very precise changes, you can zoom right into the sample to a point where one screen pixel equals one hertz!

The filtering functions in the software have been improved. Samples can now be treated to fast or slow filtering, though be warned; slow filtering on a large sample can take as long as an hour.

The effects section of the software has also been tweaked, you can add a flange, reverb, hall or echo sound in real-time to any sample.

Users of STEs or TTs will be pleased to hear that the software takes full account of the DMA chip in the computer. This means they can create true stereo samples and perform glorious effects on the sample such as pans and cross-fades.

All the main functions have keyboard shortcuts, and again, these are obviously Apple Macintosh influenced. With the excellent mouse control, this means that there are up to three different ways to perform the same function; if you're unhappy with the mouse then use the keyboard.

The Pro-Series 16 also has the best technical specification of any sampler available for the ST.

Input resolution is 16 bits with 64 times oversampling, while output resolution is again 16 bits but with four times oversampling. The signal to noise ratio is 88 decibels (input) and 95decibels (output), while distortion levels have been kept down to a very reasonable 0.05 per cent. Sample frequencies are 16, 22.05, 32 and 44.1 KHz, though any frequency can be specified in the editing functions.

This kind of sophistication is not cheap; it will set you back £350. For your money you get the sampler, a power supply, five disks of software, the appropriate leads, a massive manual and a natty attache case in which to carry it all about.

☎ Audio Visual Research is at 2a Russell Street, Luton, Bedfordshire, LU1 5EA. Telephone 0582 457348.

Andy Hutchinson

Andy Hutchinson is the news editor on ST Format. *The next issue will hit the news-stands on June 13.*

PC

- **DOS 6.0 with installable file system in development.**
- **New, faster *Toolbox* for rapid spreadsheet creation.**
- **Protect your PC with the PD virus busters.**

PC COLUMN RETURNS

A comparatively large, "Hello" from me – your loyal, until the revolution, PC-Pop-Picker. Many thanks to the editor's cat for keeping the seat warm. Let's get down to business.

DIS DOS DAT DOS

Confused? Well, I am and I'll bet many Microsoft observers are too.

Microsoft is muddling the market with its DOS 5.0s and its OS/2s and its Windows 3.0s. Even Microsoft boss, Bill Gates, admits it. So what hope is there for the rest of us, eh?

Speaking of DOS 5.0, many of you will be aware that this version will present memory management features within a small piece of code and is due any day now.

However, how many of you are aware of DOS 6.0? Truly. The next version of the old campaigner will incorporate an installable file system. Sources say that this will let DOS track and maintain links between documents.

THE NEED FOR SPEED

Intel, busy testing its i486 uprated chip that clocks 50MHz, has been meddling with another i486 chip that clocks an amazing 100MHz! Riddled with bugs and rough code at the moment, this chip will, nevertheless, form the basis for PCs in the not-too-far distant future. Holy microns, Byteman!

TAKE TWO A DAY

The latest version of the cure for all virus-riddled PCs has arrived on the Public Domain. The ever wonderful *Scan and Clean* duo from McAfee Associates has reached the heady heights of version 75!

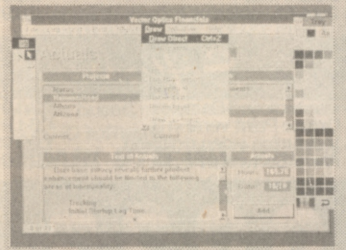
As you may have guessed, *Scan* is used first to identify any virus you may have (giving you extra information such as how many times a particular virus has replicated itself) while Clean gets rid of the thing.

Take it from me – they work. I had a Jerusalem B virus (a nasty bugger that eats .EXE files) in my Opus 386 which

TOOLBOOK AND A HALF

Toolbook is an intriguing 'script language', hypercard-type package. It gives you the opportunity to create all manner of business, personal and leisure applications, such as elaborate databases, animated presentations, pretty front-ends to existing programs, games, etc, etc.

Initial reviews gave _Toolbook_ a guarded welcome. Guarded because, even on a swift 386, _Toolbook_ was sluggish.



• Asymetrix's* Toolbook 1.5 *comes with many more scripts. The scripts for* Quicktour, *the on-line tutorial, and for* DayBook, *the "personal scheduler", among others, make it easier for you to modify the applications for your own needs.

"No more!", says Asymetrix as it hails the latest version, 1.5. Apparently the program now writes to the screen 30-40 per cent faster than before. In addition, you can, "choose to have objects on the page built off-screen and displayed simultaneously for smoother display and more realistic animation."

Other refinements for advanced programming include the removal of the limitations on the size of pages, scripts and bitmaps. Authors can now create buttons and fields that behave like controls in Windows dialogue boxes.

The new _Toolbook_ can also print pages in colour and at full printer resolution with page-scaling to fit the specified paper size. The script editor has multi-level undo and search-and-replace options and context sensitive help is available for _Toolbook_ and the associated programming language OpenScript. Finally, there is a free guide called _Toolbook Ideas_ detailing _Toolbook_ applications for prospective authors.

Toolbook costs £310. Asymetrix USA is quoting 1.5 upgrades at $75. However, anyone who bought _Toolbook_ after April 1 can upgrade to version 1.5 for free.

had replicated 63 times before I noticed something was wrong! *Scan and Clean* saved the day, spreading peace where chaos once reigned.

Available from all good PD libraries and bulletin boards.

A TALE OF TWO SIMS

The PC version of *F29 Retaliator* has finally arrived and, while I am still disappointed in the final execution of the game (caused by a sorry tale of naivety, missed opportunities and horrendous deadlines) I'm glad to report that the PC version is the best of the lot.

Many of the bugs found on the Amiga/ST versions have been cleared up, the screens have been tidied and the manual (co-written by Yours Truly) has been wonderfully re-written – ahem.

There are many highlights to *F29 Retaliator* including super smooth 3-D and the addictive head-to-head option.

Onto US Gold's (nee Velocity Software's) *Jetfighter 2* with the news that Big Bob Dinnerman is back! The man who gave us *Interceptor* and *Jetfighter 1* (no surprises there) on the PC returns with his latest tale of everyday pilot folk.

The main thrust of this new version (in addition to full VGA implementation – graduated horizons, digitised briefing screens, etc) is the choice between playing an individual mission or flying 'The Adventure'.

In this you are a member of a sort of aerial special forces team which has to eradicate terrorists from California. Covering over 100 missions this option is heaps of fun.

'Fun' is Bob Dinnerman all over, really. Technically, he's already been surpassed by the big boys and there are other sims to buy if you yearn for 'realism'. However, if you simply want to enjoy yourself, buy *Jetfighter 2*.

ADIEU

As this is my first time (steady) I would appreciate a few letters to keep me from becoming lonely. Problems, hints, news and views – you name it, I'll read and print (most) of it. Please send any correspondence to the usual *Express* address: 30 Monmouth Street, Bath, Avon, BA1 2BW.

Paul Rigby

ARCHIMEDES

- **Program your Archimedes to read you a bedtime story.**
- **Nominating library files**
- **Choose the software you want with pick 'n' mix PD.**

SUPER SPEECH!

If you hadn't already guessed the 'long awaited' Archimedes version of Superior Software's excellent *Speech!* program is now available. *Speech!* caused a stir in the market when it first appeared in early 1986 – a mere 16K ROM that was capable of producing surprisingly recognisable speech from the Beeb without any external hardware.

Five years on and Dave Hoskins, the author of the original *Speech!* has come up with the Archie version. The software is supplied on disk as a relocatable module with various accompanying example programs.

There is a rather fun demonstration complete with an animated *Speech!* 'genie', a desktop front-end to the module and a rather simple 'Speak-'n-spell' type game.

To get the program to say anything, you have to use the *SAY

(Continued on page 24)

THE MONSTER STEREO CARTRIDGE

Stereo sound on ANY ST? Don't make me laugh.

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ARCHIE TECH TIPS: PODULE PROBLEMS AGAIN

Remember in *Express 131* I was telling you about the problems I was having with my backplane? Well, my Archie has been crashing quite severely of late whenever it has just finished printing out a page on the laser printer. This is so much of a crash that it even locks the mouse and will only be cleared with a Ctrl Reset.

Dismantling the machine revealed that the backplane was not quite fully pushed into the main circuit board – one firm shove later and I haven't had any trouble since!

I don't know if this is just a problem with my machine and backplane, but if you ever have an unexplained crash, it may be worth checking out.

command. This tries to intelligently guess the pronunciation of words. In most cases it will get them right, though you may need to apply some rather odd tweaks to make the word sound correct (for example, MOHNETOR for monitor).

Using the *SPEAK command allows more direct control over what phonemes (speech sounds) are uttered, ie IX for the 'i' sound in 'into'. A full list of about 70 phonemes is given in the instructions. You can vary the speed and pitch of the voice independently, which, if you're careful, allows the voice to 'sing' quite convincingly.

Even more precise control is achieved with the *MOUTH and *TONGUE commands; these vary the 'format frequencies'. What these are the manual doesn't say, but you can get some quite weird and wonderful voices by playing around with them.

The voice itself is remarkably clear, certainly not up to HAL (*2001*) quality, but good enough to be able to understand without having the words written down in front of you. The earlier *DT-talk* failed on this count. You couldn't make a public speech with *Speech!*, but then for £20 what do you expect?

LIBRARY DIRECTORIES

On ADFS and NET it is possible to nominate a library directory (usually $.Library). When you *RUN a file, the current directory is examined to see if the file exists. If it doesn't, the library is checked and then run from there if it can be found.

Only if both of these fail does the OS report a 'File not found' error. This means you can put all sorts of useful and commonly-used programs in the library without having to keep copies in all your working directories. This facility was even available under DFS on Beebs with the obvious restriction of single letter directory names.

Unfortunately it is not possible to nominate a filing system in the library name, so you *can't* say *LIB adfs::4.$.Library. This can be somewhat annoying, if, say, you are working in the RAM filing system and type *Twin – unless you have a $.Library in your RAM disk, you'll get a 'File not found' error.

Oddly enough, Acorn did add a command to the Master series MOS that got round this problem – *LibFS. This made the current filing system the so called 'Library filing system', so by typing *-adfs-LibFS you could 'redirect' library accesses to adfs.

This command was not carried over to the Archimedes. But all is not doom and gloom as a much better system was added instead.

The system variable Run$Path contains a list of comma-separated prefixes which are applied in turn to any file that is *RUN. By default it contains ',%.' meaning try the current directory first (ie no prefix) and then try the current library (ie prefix %.).

By changing this with *Set Run$Path ,%.,adfs::4.$.Library it will then search the directory $.Library on hard disk 4 on adfs wherever you happen to be working RAM disk, a SCSI drive or IDE. It even works with the PD Spark-like filing system ArcFS.

NEW PD LIBRARY

I received a press release recently annoucing the arrival of Arch Angel, a new Archimedes public domain library.

Apart from the usual compilation disks (at £1.10 each), Arch Angel claims to offer a unique pick 'n' mix service. It will supply you with a demo disk which contains a handful of text files which contain the name, purpose and most importantly, size of each piece of software it has to offer.

You can then order precisely the progams you want for £1,50 a disk. Seems quite a bargain to me.

☎ Arch Angel is on 0392 68019 or write to 9 Chancel Court, Chancel Lane, Pinhoe, Exeter, Devon, EX4 8QE.

Ken Coumarin

CPC

- **Zap away at your screen with the Trojan Lightgun.**
- **Is the language in *Viz* too hot for the kids?**
- **Is this the beginning of the end for the CPC?**

SHOOT FIRST!

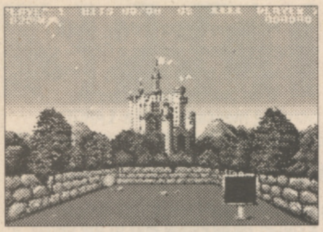
Until about six weeks ago, I'd never heard of Trojan, but this Welsh company is the one that produces cartridges for Amstrad, and has played a great part in the development of the new hardware.

It also manufactured the Virgin Lightgun. The gun may not have taken over the world, but Trojan is less than happy with the software that was provided at the time.

However, the Lightgun is set for re-release, this time with Trojan's own software, and running on the console! The company's plans have not been finalised yet, so I can't guarantee when (or even whether) the revamped gun will see the light of day, but I can tell you a little about the games so far written.

The idea is to package two games with the gun. *The Enforcer* is a '30s gangster-style *Op Wolf* format shoot-out, while *Skeet Shoot* is a clay pigeon blasting game.

Skeet Shoot is the office favourite. The action takes place in various



• *Trojan's new lightgun game* **Skeet Shoot** *will test your reflexes to the limit!*

countries, and apart from the little clay disks you can shoot ducks flying across the top of the screen for extra bonuses, as well as coins and low-flying aircraft!

The best news of all is that the gun is really accurate – much more so than it was with the original software. Instead of being a novelty, the gun is a really good games playing device.

KIDS' STUFF?

I've just been playing the *Viz* game on the Speccy (yes, I know, horrible isn't it) and I was shocked! The language, you see, is extremely specific.

I'm told the packaging will have a, "Not for sale to children" warning on it, but will that be enough? There's stormy water ahead, methinks.

Anyway, what about the game itself? Well, it contains all your favourite *Viz* characters, but concentrates on three in particular: Johnny Fartpants, Buster Gonad and Biffa Bacon. They're competing in a kind of obstacle race, punctuated by humorous sub-games, and that's about all there is to it.

I'll give you a full report when I see the Amstrad version, but don't hold your breath. I think this one will be good for a few quick laughs and not much else.

THE END IS NIGH?

Steve Smith from Liverpool thinks the CPC is on its way out. Why? Well, let the man speak for himself...

"It looks like the CPC is in its death-throes (surely not?). Here are the signs as I see them:

"● The lack of sales for the GX4000 and Plus machines over the introductory Christmas period. I believe that these did sell well on the continent, though, which is good.

"● All 8-bit machines are relatively outdated due to progress. People want 16-bits and PCs as they are the natural progression, like the colour TV was to the B&W TV, or the electric light was to the gas lamp, come to that.

"● Consoles seem to be becoming very popular with the trade. Although they are good for cutting out piracy, I doubt consoles are as popular with the older users of less limited computers, be they 8-bit, 16-bit or PCs.

"● Activision has already said it will no longer make 8-bit games.

"I realise that CPCs have a good few years left in them yet. But it must be said that the C64 is almost dead. After all, who but an enthusiast would now buy a Ford Anglia as opposed to a Sierra or Fiesta?

"I don't really mean to sound like a depressive git. I am just being realistic (I think) about my beloved machine's future. After all, I don't want to have to fork out for another machine and a new crop of expensive software."

What do we think of that then, folks? Do we agree or disagree? I think Steve's letter raises some interesting points, if only because it demonstrates some of the current misconceptions about the computer market.

First, the GX4000 and Plus did do comparatively badly over Christmas. Yet this is due to reasons, in my opinion, unrelated to the technology involved. With software in such scarce supply over this period, it would be surprising if the machine had done well. Don't forget too that Sega and Nintendo are having their best times yet with sales of their 8-bit consoles, so you can't say no-one wants 8-bits any more!

Second, you can't really describe 8-bit machines as being 'outdated'. Steve's gas and electric lighting analogy is entirely inaccurate, because the only difference between 8-bit and 16-bit computers is power. It would be fairer to say that 8-bit computers are like 40-watt bulbs and 16-bits are like 150-watt ones. 8-bit technology isn't obsolete just because it was developed first!

Instead, since lower technology is always cheaper to manufacture than higher technology, the 8-bits have formed their own 'budget' market.

Third, yes, consoles are popular with the trade. That's because they're popular with users! Try as they might, most manufacturers have trouble selling millions of things people don't want.

Finally, although Activision says it has pulled out of the 8-bit market, that's what Palace Software said! The days of the 8-bit home micro are numbered, it's true, but I don't believe the market is going to collapse overnight. I think what we're going to see is a gradual decline as 16-bit technology becomes ever more affordable.

But will you ever be able to buy a 16-bit computer for £150, or 16-bit games console for £80? Until that day, the 8-bits will be with us. Here endeth today's lesson.

Rod Lawton

Rod Lawton is the editor of Amstrad Action. *The next issue hits the streets on June 20.*

C64

- Turrican to return with the tried and trusted formula
- Create your own demos with new graphics enhancer
- Essential pokes for instant success at the latest games.

TURRICAN AGAIN

Fans of the superb *Turrican* and *Turrican II* should be delighted with the news that Rainbow Arts is preparing a second sequel, called, would you believe, *Turrican III*. Little is known about the game at the present time, but rest assured the run/jump/shoot/explore aspects will remain intact.

One thing is for certain; the game will *not* be written by programming

(Continued on next page)

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LEMMINGS ON THE C64?

After the colossal success of *Lemmings* on the 16-bit machines, the usual banter about a C64 version began to fly around. Any programmer worth his salt would instantly chuckle at the very thought; the 64 has eight hardware sprites, and although they can be multiplexed only eight can be in a horizontal line.

The Amiga version of *Lemmings* has hundreds of rodents wandering around. If an 8-bit version goes ahead it should be very interesting to see who lands the job and, more importantly, if they can actually pull it off.

genius Manfred Trenz. *Turrican II* was his last game for the C64.

In the meantime, why not treat yourself to the aforementioned *Turrican II*; it's probably one of the best games around at the moment, and combines the usual gameplay with a vertically scrolling section, plus a very *Denaris*-esque shoot-'em-up level.

And I guarantee that the final guardian on level five will make your very eyes pop out!

HOT POKES

Alright, so you've squandered all your pocket money on the latest software sensation, only to find that you can't play it to save your life.

Never fear, here are some pokes, cheats and tips for some of the hottest releases...

Shadow of the Beast – On the title screen, when the scrolly message rolls across the VDU, type in 'HOW SAD BE THE FATSO' (with spaces). The energy indicator at the top left changes colour, and you can start the game with oodles of energy.

Hawkeye – On the title screen type 'VALSSPELER' and the Thalamus logos start to flash. Voila! Infinite lives with which to play. But be warned that you can only reach level nine using this cheat. A more honest way of earning loads of lives is this; if you get past level five without losing any lives, a secret level will load in before level six. Here you can collect masses of lives and bonuses.

Dizzy Collection – For infinite lives, enter the relevant pokes for each game (Action Replay only, I'm afraid)

Dizzy	POKE 15942,173
Fantasy World Dizzy	POKE 9652,173
Magicland Dizzy	POKE 9860,173
Fast Food Dizzy	POKE 20405,173
Kwik Snax	POKE 37621,173

DEMO FEVER

After my look at PD software a couple of issues ago, I have again been flooded with disks from Binary Zone PD.

The first this week is a strange demo with the even stranger name of *Wiz Up & Urp*! It starts with some pseudo 3-D effects, and a very *Flash Gordon*-esque tune. Following this is a very colourful logo, some bouncing balls, and then a mini graphics slideshow. The pictures are colourful but lack realism.

Finally, a couple of logos and then the icing on the cake – the letters WOT fly towards you in breathtaking 3-D.

The next megademo is *Legacy*, and after a wonderfully drawn title screen comes a very Amiga-inspired section, complete with rotating logo and fast 3-D vector graphics.

Next comes something which I thought I'd never see on a C64 – stencil vectors. The result is simply brilliant.

Then there is the ubiquitous scrolling message (with a 'LARGE' difference), a neat *Ballblazer*-type screen, some more zoom text, a picture of a *very* scantily clad lady with some 3-D objects over the top, and then a rather picturesque end to the demo; a lovely panoramic mountain view overlooking a lake, accompanied by the music from *Turbo Outrun*!

The next is a mini-megademo from BS Studios which begins with a gorgeous picture of an angel (some of these demo guys are really talented).

After a bog-standard scroller comes a great FLI logo (with thousands of colours) complete with a sunset strip at the bottom. The demo concludes with an eerie picture and some equally eerie music.

The final demo of the bunch is my favourite at the moment, and goes under the name of *MC Gottifant* (?). It features an excellent cartoon elephant(complete with a baby elephant on her back) running along the road in a great hurry.

She stops at traffic lights, has a drink, and falls down umpteen holes. Silly, but a good laugh.

SUPPORTING ACTION

If you own one of those boxes of tricks known as an Action Replay cartridge, then you might want to get your hands on an interesting little item known as *The Graphics Support Disk*.

Available from Datel Electronics at the mere price of £9.99, it will help you to squeeze a little bit more out of your cartridge. The main program on the disk is a demo maker, and as its name suggests, it allows you to create stand-alone demos.

First, you can load in a bitmap picture (saved using the Action Replay cartridge) or stolen screen (more on that later), and then you can load in a font for a scrolling message. Alternatively, you can create your own fonts using the editor supplied.

Next is the music, and the music hacker is quite successful with the majority of Rob Hubbard tunes, but there are five demo tunes on the disk in case you can't hack any.

Once your picture/font/music has been loaded in, the Demo maker will mix the whole caboodle together and create a...well... unique demo!

Now the scene-stealer is a bit special. Say, for example, you froze *Uridium* in the middle of a game and stole the scene. You could load the file back into any C64 and the scene would be displayed for you (just like a screenshot in a magazine, complete with sprites).

It can also steal character sets from practically any game, and furthermore they can be loaded into utilities such as *Graphic Editor*.

What the practical uses for this are, I don't know, but programmers could use it to send out screenshots of a game without actually exposing the game to pirates.

Datel Electronics reside at Govan Road, Fenton Industrial Estate, Fenton, Stoke-on-Trent, ST4 2RS.

Andrew Roberts

Andrew Roberts is a regular contributor on Commodore Format.

SPECTRUM

- **File copying in Plus D made simple with The Copier.**
- **Give you games depth with 3-D Construction Kit.**
- **Phone up the Phantom fanzine for chat and charts.**

COPYING ON PLUS D

After years of having little to report on the subject of the Disciple/Plus D disk system I've been positively overcome with info on the thing. Hope you Plus D-less people don't mind me mentioning it again this week.

Malcolm Perry of Worcs has written to me about a new utility for Disciple/PLus D owners called *The Copier*. Unsurprisingly, this turns out to be a program that copies files and Malcolm reckons it does this in a far superior way to the standard, plain vanilla COPY in the Plus D.

Strangely, the program comes on tape and transfers itself to disk on first loading. The major plus points of this utility, Malcolm reckons, are the way, "it does not reset the Spectrum each time a copy is completed" and the fact that "it will copy all the files that the Plus D (and some other programs) will not, ie *Snapshot*, *Opentype* etc."

A further boon is the user friendly nature of the package which asks if you want to retry if it finds a corrupt sector and apparently has a clear and helpful screen layout.

To conclude his recommendation, Malcolm says, "For anyone frequently handling files, backing up disks, moving files around, tidying up disks or with a lot of files that Plus D DOS refuses to copy then this routine is a must."

That's a pretty hearty recommendation from someone I assume isn't related to the author.

The Copier is available for £6 from: Shimon Young, 21 Colchester Road, Southend-on-Sea, Essex, SS2 6HW.

"ERE, YOU GOT ANY DIRTY COMPUTERS..?"

Talking of unfeasibly large phone bills, did you realise that it's not only saucy sex chat lines you can reach with 0898 numbers. Bruce Everiss, a bit of a computer industry entrepreneur, has been running a computer-related phone information service for some time now, and has made available a credit card style information card.

This is a chunky piece of plastic with the numbers of the various 0898 computer helplines painstakingly hand-carved into it. If you want one to tuck next to your American Express simply send an SAE to Bruce Everiss, PO Box 71, Kineton, Warwick, CV35 OXA.

BOOMING FANZINE

Anyone out there with a modem should forget about their phone bills and check out the Phantom bulletin board. Its on-line Spectrum fanzine, *Boom*, is back and needless to say, bigger and better than ever before.

Sections include reviews, tips, a chatline, charts and a SAM specific screen. Phantom BBS is a Viewdata host open 24 hours a day.

☎ Phantom is on 0226 340425.

GETTING TECHIE

I'm not particular adept at telling my Speccy what to do and usually shy away from anything more complicated than typing LOAD "" or swearing at it.

There are, however, some clever people out there who know the secrets of our machine and can manipulate it to perform impressive tasks. Luckily one such person is Adam Tommasso of Inverness and he's willing to reveal all for the general good of the Spectrum using world. What a sound chap!

Here he illuminates we mere mortals on the complicated workings of the MOVE command:

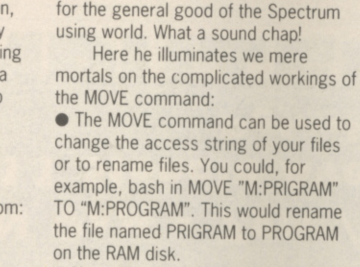
- The MOVE command can be used to change the access string of your files or to rename files. You could, for example, bash in MOVE "M:PRIGRAM" TO "M:PROGRAM". This would rename the file named PRIGRAM to PROGRAM on the RAM disk.
- You could also use A:, T:, B: or M: for drive A, Tape, drive B and RAM disk, respectively. MOVE cannot be used for renaming files between two sources so MOVE "A:PROGRAM" TO "M:PROGRAM" would not work.
- Access Strings are very useful except in one case. The strings are P, S and A. The basic command goes MOVE "FILENAME" TO "+P" (or "+S" or "+A"). The P stands for Protection and makes the file unerasable.
- To reverse the process you use the same command but with "-P" instead. S

(Continued on next page)

CREATING GAMES IN THE THIRD DIMENSION

The *3-D Construction Kit* looks set to be one of the most important Speccy releases for eons. With a buyline of 'Build Your Own Virtual Reality' it will allow you to create 3-D epics like *Driller* and *Castle Master* from your very own MFI computer desk.

Obviously we'll have to wait and see how good the finished product is, but personally I think it's a good thing that the Speccy's not considered too humble for such epic productions. Let's hope other software houses follow Incentive's and Domark's lead and don't leave the Speccy out of their plans when releasing hugely complex, memory intensive mega games.



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equals System Status. This is a goodie. It makes the chosen filename invisible to a normal CAT. You would have to type CAT EXP to see the file you have chosen. (CAT EXP is basically an expanded version of CAT. It will tell you if the file is basic, Hex etc.) This is good if you want to keep your files from inexperienced users.

Finally, A stands for Archive. Adam doesn't know much about it and neither does the manual. Apparently, it's concerned with the Plus 3 and Plus 2A (which disk drive apart are the same machine) and their compatibility with the CP/M operating system.

MAGICAL POKE

The ever talented Mark Harris has just sent me some more pokes and as is customary, I'm going to respond with the usual fawning display of gratefulness. So, eternal thanks go again to Mark, surely the nicest Spectrum owner in the whole of Faversham (near Kent).

To get his hack for *Slightly Magic* working just:

1) Type in the following routine and SAVE it if you think you are going to need it again
2) RUN the thing
3) Start your game tape from the beginning.

```
10 REM SLIGHTY MAGIC
55 FOR N=23434 TO 9E9: READ
   A: IF A
```

Robin Alway

MACINTOSH

- Was System 7 rush-released?
- Is the Hypercard virus anything to worry about?
- Word processor, database, graphics – *Desk* has the lot.

SYSTEM WHAT?

You must remember that this column is written well over a week in advance of publication. So, as I sit here on Saturday afternoon, the official launch of System 7.0 is still a day and a half away.

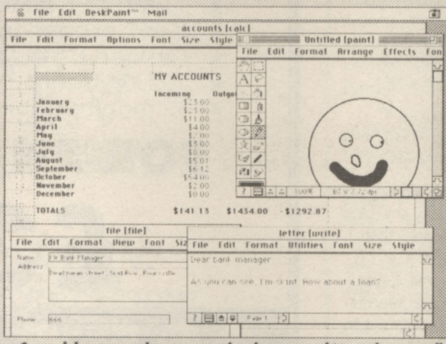
Apparently the golden masters (Apple-speak for the disks which are actually duplicated several million times) were a day late getting to the duplication factory, but the launch is still on schedule for Monday morning.

Actually, the way that the master System 7.0 disks were chosen is rather interesting. Since early this year, developers have been receiving beta versions of the System to help them prepare their applications and upgrade them to take advantage of System 7.0's new facilities. The betas started (surprisingly enough) at 7.0b1, and progressed through until the first relatively usable, stable version – 7.0b4.

Essentially, what happens is that developers and beta testers report any problems with a beta version, and these problems are fixed in the next version (theoretically). So, for instance, if 7.0b1 didn't work with Microsoft Word, the compatibility problem would supposedly be rectified in 7.0b2.

But these bug fixes are written with

EVERYTHING BUT THE KITCHEN SINK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Dear bank manager

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If you've just bought a Mac and are looking for a wordprocessor, a database, some sort of graphics program and a spreadsheet, you could do far worse than take a look at *Desk*, from Zedcor.

***Desk* is an integrated set of all the above applications plus a paint and a draw program and a comms package. They are accessible as desk accessories from the Apple menu, and so are available at any time.**

While the programs are not as fully-featured as full-size applications, many will find them perfectly adequate for almost any job. The word processor, *DeskWrite*, can save files in MacWrite format, which can be read by virtually all applications. The paint package is good and allows you to work in colour or black-and-white. The spreadsheet can read and write SYLK files (which virtually all other spreadsheets can understand) and the database is perfect for small-to-medium applications.

The real benefit of the *Desk* suite of programs comes when you discover the price – just £150 for all sized applications. At that price, you can't go wrong.

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VISA Access

no regard to the stability of the product as a whole – so by 7.0b3 the software was compatible with most things but suffered major stability problems. This is standard in complex software, and version 7.0b4 was altered to cure the stability issue.

Since beta 4 there have been at least five other versions, each of which has had minor 'tweaks' to cure other problems which came to light as development proceeded.

As the deadline for disk duplication grew nearer, each of the new betas was considered as a final candidate for the golden master; the latest beta available at deadline time was the one which changed its name from 7.0bwhatever to System 7.0.

Of course, this raises questions as to whether all the bugs have been removed from the new System.

Well, the answer has to be no – it's virtually impossible to totally debug such a large and complex piece of software. Indeed, some insiders have reported that as many as 1,000 minor bugs have been found but could not be fixed by the release date.

Don't let this worry you, though – System 7 should be at least as stable as 6.0.7, and hopefully rather more so.

One more bit about System 7.0; will your applications be compatible? Along with the System upgrade disks, Apple is shipping a compatibility checker in the form of a HyperCard stack which will scan your hard disk and tell you which of your applications won't work under the new System.

Of course, it can't store details of all possible INITs and DAs, but at least you'll be told if your major applications will work.

One that definitely doesn't is *Turbo Pascal* – and there's no upgrade planned. A shame, because it was a neat programming environment.

Another incompatible application is *Norton Utilities* for the Macintosh 1.0. Speed disk works (although you'd be advised not to use it in case of crashes under the new System) but the main Utilities application takes one look at your hard disk, tells you that it's incompatible and quits. There is good news, though – an upgrade will be available RSN (Real Soon Now).

Programs which seem to have little or no trouble include *MacPaint*, *Microsoft Word*, *Quark XPress* and most other major applications. Of course, they won't be able to take advantage of new features like *Publish* and *Subscribe*, but at least they will run.

INFECTIOUS STACKS

There has been something of a panic over the announcement of a new virus, which infects HyperCard stacks.

Rumours have been circulating that the virus will trash your hard disk, erase your data, blow up your Mac and so on and so forth.

In fact, on a set date later in the year, any infected stack which is opened will print a short message and then play four German folk tunes. And that's it.

Some of the commercial anti-virus packages have been upgraded to detect the virus, but John Norstad, author of the public domain anti-virus program *Disinfectant*, is reported to have said that he will not be upgrading from *Disinfectant 2.4* as it is too easy for HyperCard virus writers to get around any protection which he could write.

Incidentally, *Disinfectant 2.5* (expected RSN) is being re-written to be fully System 7.0 compatible.

Ian Wrigley

POSTCARD FROM AMERICA

Do Not Fold Spindler, or Mutilate. I caught Apple's chief operating officer, Michael Spindler, at DB/Expo '91 – the National Database Exposition. He gave a hour-long speech in the new wing of San Francisco's Moscone Center.

I took the escalator upstairs, and almost flew out the window. The glue used in the new construction was still drying and everyone was high. I'm sure that's why I couldn't keep my eyes open through the entire talk. Zzzz...Apple...zzz...future...zzz. Great stuff, Mike!

His best line was on the the attitudes of computer professionals: "No one wants to be an end user... who in the history of human behaviour wants to be a terminal, dumb, or intelligent?"

There was a little translation problem in the speech. Spindler's English is very clear now, but he used a Macintosh-ism that went over the heads of his command-line audience. When talking about how users access data, he said, "When you double-click on the chart." Double what?

Poor Spindler, he thought he was finished for the day when he headed out the conference doors, with his entourage of Apple marketeers. Not quite.

A Reuter's reporter picked out a line from the speech – "I'm terrified about where my fiscal 1992 revenues will come from." I remember that he said this twice, referring to the climate of information analysis, and the needs of managers for timely results. The reporter, though, took this to be a comment on Apple's future.

After a bit of creative editing, the story got even better. Spindler became Apple's Chief Executive Officer. Interestingly, "Apple expanded its product line to include personal computers." Of course, they meant "low-cost"computers. They've actually been selling vacuum cleaners door-to-door, and are leaping into the microcomputer market.

This story played on the radio, and was sighted in small town newspapers around the US. A day later, after Apple public relations set them straight, Reuter's sent out a revised story.

David Morgenstern

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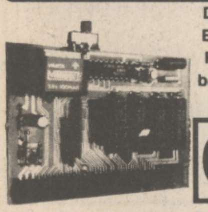

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N.B. Due to the large variance in design of the Atari ST, there is a small minority of boards in existence which may require a little soldering.

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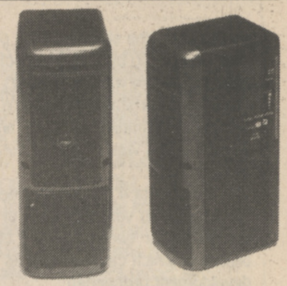

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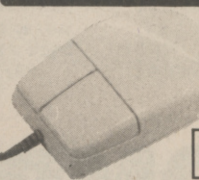

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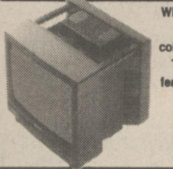

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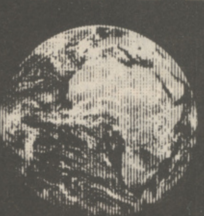


Steve Gold digs out the juicy computer stories from around the world. This week he's found Apple testing a new multimedia system, Dell has been slashing prices, bigger drives are being prepared for the Mega ST and Matsushita is shrinking...

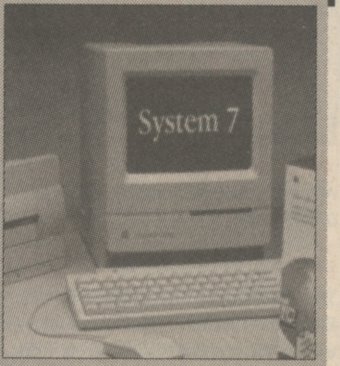
APPLE'S AMAZING MULTIMEDIA TECHNOLOGY

While everyone in the Mac industry is busy looking over System 7.0, the Mac's new operating system, a few selected developers are being shown a new technology system called *Quicktime*.

It is being billed by Apple as having far-reaching implications of the same magnitude as *Hypercard* for the Mac. What is it? Like *Hypercard*, it's a concept that's difficult to put into words. According to Apple it "increases the bandwidth of what can be presented on a personal computer."

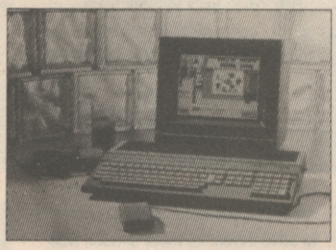
Quicktime is, in fact, the medium that Apple hopes will act as the glue to hold video, sound, animations and pictures together in multimedia systems. Unlike multimedia systems on the PC, *Quicktime* allows multimedia applications to be integrated in windows on the Mac - with other applications software running concurrently.

Quicktime runs as a 3.5 inches square window on the Mac screen. There are three parts to the system - a movie editor, a compression manager and a component manager. It will be officially unveiled by Apple on June 3. Prototypes are being shown privately at Comdex in Atlanta, Georgia, this week.



• New look Mac: new multimedia angle

BIGGER, BETTER ATARI DRIVES



• Atari ST: high density drive soon

While existing Atari Mega ST and TT owners still have 720K floppy drives, the rest of the Atari range have 1.44MB drives.

The reason for this is that the Western Digital controller chip used by Atari does not currently run fast enough to support the high density disk format

According to Ron Kovacs' Z-Net online newsletter, Atari is liasing closely with Western Digital over the development of a new custom chip for the Mega ST and TT series. The problem is, of course, what happens when the high density disk format becomes standard on the machines?

No problem, says Z-Net. Atari used a plug and socket system on both machines, instead of the cheaper direct-soldered system it usually uses. This will allow existing users to upgrade to the new chipset when it becomes available later this year. Now all we need is a cheap source of high density disk drives...

MAC WORDPERFECT UPGRADE

Just days after Apple announced System 7.0, WordPerfect Corporation has announced version 2.1 of its word processor for the machine.

According to the US software house, v2.1 will take advantage of all the capabilities of System 7.0, including the Edition Manager, Balloon Help, Aliases, Truetype, Virtual Memory, and Apple Events. The package, which was due to be announced at Comdex Spring in Atlanta, this week, will ship during the third quarter of the year

So what are all these extra features of System 7.0 then? Edition Manager allows users to dynamically share data between applications on the same machine or across a network. Balloon Help, meanwhile, supports a series of pop-up balloons that guide the gentle user through the Mac's operating system using a series of pull-down menus, dialogue boxes, and a host of other very useful facilities.

In the US, *Wordperfect 2.1* for the Mac will sell for $495. That should translate into around the £300 mark by the time the package appears in the UK. Although you're unlikely to save much money by ordering direct from the company's US operations – Wordperfect UK is trying to keep the UK prices of its packages in line with the US – you'll probably get the software a bit quicker if you order direct. Contact: Wordperfect Corporation, 1555 North Technology Way, Orem, UT 84057, United States. Tel: 0101 801 225 5000.

• WordPerfect: System 7 upgrade arrives

DIGITAL IS BACK!

Digital Equipment Corporation has introduced a new range of computers ranging from notebooks to workstations. The Intel-based machines, which were launched in the US last week include:

- The DEC 433 workstation, a desktop computer using Dos and OS/2-based software with 26 MIPS that costs a reasonable $5,999.
- The DEC 433T, a deskside system with a floor-standing station that also uses DOS and OS/2- based software and costs $11,995
- A portable laptop computer that tips the scales at 11.9 pounds and costs $6,450 and notebook computer that weighs 6.2 pounds and costs $4,895.

Digital claims it has undercut all rivals on pricing.

CALLING ALL COMPUTERS

Imagine having the facility to power up your personal computer simply by calling it on the telephone.

Hong Kong based Yucomp Ltd. has launched the RSW-800, a remote power switch for PCs which is activated by a simple telephone call.

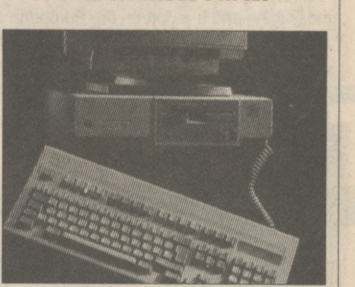
The RSW-800 is a small black box which connects to the modem attached to the PC. It relies upon the modem to interpret the signals from the telephone, not dissimilar from the PC itself. Consequently, the only device that needs connection approval is the modem. The device senses when the modem has received eight ringing tones from the incoming telephone line and then automatically powers up the PC. The idea behind the system is that, once the PC boots up, it will run a batch file that would carry out whichever functions the user requires. It costs about HK$1,200 (£85).

MATSUSHITA IS HARD AND FAST

Matsushita has unveiled a 210Mb 3.5 inch hard drive which the Japanese giant claims is the world's largest capacity drive in this form.

The RD210AA is being marketed as a slot-in replacement for the NEC 176.5Mb drive which was the previous record holder for high capacity 3.5 inch drives. Matsushita says that the high capacity of the drives is made possible by the use of negative sliders that reduce the pressure between the drive head and the disk surface. Expect shipment of the drives later this year.

DELL SAVAGES PRICES



• Dell PC: UK price cuts?

Dell has shaved US pricing on nine of its desktop and laptop computers. The price cuts range from $100 to $900. The Dell Systems 210, 325P and 333P have been cut by $200, while the 325D and 333D have been reduced by $100 in all configurations.

The 316LT and 320LT laptop systems have been reduced by $400 to $800 depending on the configuration, and a reduction of $900 has been made on all configurations of the popular Dell System 433P.

According to Dell US, the price cuts take effect immediately and are the first stage in what the company calls a series of aggressive actions "to maintain our competitive advantage in the industry".

Over to Dell UK for a similar price cut on this side of the Atlantic perhaps? ■

The EVENT HORIZON

Who's doing what, with what, with whom, how, why and where...

THE PLACES TO BE . . .

Virtual Reality '91 5-6 June
At the Conference Forum, London. Info: 071 931 9985.

EEMA 11-12 June
This conference, organised by the European Electronic Mail Association, will be the most ambitious of its kind, both in terms of theme and conference concept. Various important industry figures will be speaking, including Leon Hendriks, EEMA chairman and Bob Sleeman from the Bank of England.

EEMA was formed in March 1987 with a view to coordinate and assist the development of message handling within Europe. It is a non-profit making organisation open to individuals as well as companies.

A number of critical new projects will be launched at the conference, including a study into the emergence of European messaging and a report on the European ADMD Interconnection Matrix.It will be held at the Sheraton Copenhagen Hotel, Denmark. Further information can be got on 0386 793 028.

OIS IMC '91 2-4 July
Image processing is of particular importance to document managers and those working with information. OIS IMC aims to address the problems people face when attempting to manage the unstructured information contained in documents. The solution of Document Image Processing means that documents can be captured as they enter an organisation or department, placed in electronic form and filed on computer. This means that instead of two sources - one for the filing data and one for the actual documents - users can have access to both on a single screen.

The conference will be divided into two main areas: one aimed at end users, detailing such issues as defining requirements, choosing the correct media, law and the selection of Document Image Processing systems; the second is aimed at those involved in the technology of DIP and will include discussions of system and management level software, user interface development, developments in input and output peripherals, and storage management. It will be held at the Wembley Conference and Exhibition Centre, London. Further info on: 071 931 9985.

PC World Forum 9-14 July
In Moscow. Info from Terence Coe on 010 1 508 820 8122.

The International 16 Bit Computer Show 12 July
At the Novotel Hotel, Hammersmith, London. Info on: 0726 68020.

Leeds Computer Extravaganza 13-15 Sept
At the New Exhibition Centre at Leeds University. Info: 0532 677 657.

Image Processing '91 29-31 Oct
At the Birmingham NEC. Info: 081 868 9933.

Computer Graphics '91 5-7 Nov
At the Alexandra Place in London. Info: 081 868 9933.

Desktop Cad '91 5-7 Nov
As above

Computers in the City 12-14 Nov
At the Barbican Centre in London. Info: 081 868 4466. ■

The Insider ...

A brief but regular look at the news and views of an industry which is desperate to be loved and then respected in the morning

Welcome to a new column in which you get to read about all of those useful bits of information and gossip from the computer industry. The Insider wants to know what's going on out there because those 'Industry figures' you are forever reading about want to keep it quiet. Send any 'Insider Info' to: The Event Horizon, New Computer Express, 30 Monmouth St, Bath BA1 2BW.

Anonymity is assured, as is a fiver for anything used.

WHO'S SUEING WHO?

There are a number of factors which keep the games software industry alive and kicking: creativity, marketing, desire, passion, and of course, money. Large amounts of the stuff. This latter factor is often split between programmers and publishers. Well gossip has come The Insider's way which suggest that one British programmer is not pleased with a midlands software house. Hopefully the whole thing will be settled amicably before court proceedings take place.

CRACKING STUFF

The Insider is a person of flexible opinions at the best of times , but the idea of one person having cracked, which in real terms means stolen, over 400 games from a little house in oh-so-naaaace Worthing is more than can be handled. Beware CW, the forces of righteousness are all ready on your *worthless* tail. Does any one have the name and address of a cracker looking to be cracked.

YOUNG'S FREE AND SINGLE

Wasn't it nice of ex-Amstrad employee Barry Young to back up Alan Sugar on the bearded one's decision to sack Amstrad staffers? When asked what he thought of being binned from Brentwood, Bazza merely expressed his continuing admiration for Mr Sugar. Nice one Baz, The Insider firmly hopes that such loyalty to a company which has just kicked you into touch was suitably remunerated....er repaid ... er ....!

WHO SAID IT?

This week's clue: A marketing manager with Lynx in the computer world was heard to say the following at a recent, that means the week that this issue of *Express* went to press, press do:

"It takes five minutes to lose a reputation and five years to rebuild it".

FAVOURITE THINGS

Commodore UK's managing director , Steve Franklin has been known to imbibe the odd tumbler of Jack Daniels and coke(a cola).That's sour mash bourbon?

Golden Moments

A look back into the history of computing with *Express.* If it happened we reported it first.

ONE YEAR AGO

● Infocom was closed down with a loss of $9 million. Infocom was an American software house specialising in adventures. Its most famous was *Zork,* which was based on the original mainframe adventure game.

● Nintendo, that company renowned for philanthropy, last year gave $3 million to the Massachusetts Institute of Technology. The aim was to fund research into the educational possibilities of video games.

MIT had no obligation to develop games for Nintendo, the Japanese giant was hoping for some ideas that might be of use, not necessarily in an instructional-orientated game.

● Aspersions were cast on the use of computers in life-critical tasks such as monitoring air traffic control and nuclear power plants. This was the finding of an Australian report, which described computers as being complex and unreliable.

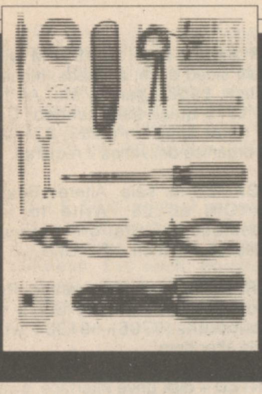
The study cited 36 examples in which computer malfunction had killed people or caused major damage.

Ken White, manager of the nuclear plant at Heysham, believed that hardware failures could be coped with using backup systems. He made no comment about software failure, and as every programmer knows, there is no such thing as an error-free program.

TWO YEARS AGO

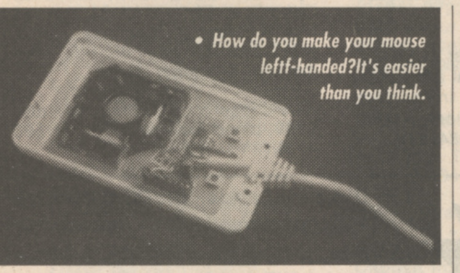
● *Express* reported the launch of the first rewritable optical disk commercially available in the UK. The Inspire, from Alphatronix, was released for PC compatibles and the Apple Mac.

Although it can store 650 megabytes on its 5.25" diameter disk, when released at £6000, sales were not expected to be high. Now, as prices of such technology fall and the size of applications increases, rewritable optical disks seem more of a viable storage medium than ever.



CIRCUIT CITY

Making an Amiga mouse sit up and beg doesn't sound too easy. Andrew Roe showed us three ways to make it jump through hoops.



• How do you make your mouse leftf-handed?It's easier than you think.

It's easy enough to pick up the phone and spend an arm and a leg on switches and peripherals to make living with a mouse easier. Several companies are only a credit card away from a solution to your problems.

If you'd rather do a little bit of the work yourself and you're handy with a soldering iron, there are several switches you can make using a minimum of parts available from any electronics supplier. Some of these jobs can be done in software but often software routines tangle with applications and a physical hardware solution is generally better.

SIMPLE SOLUTION

The first thing to do is change the switching of a mouse to a mirror image, so that left becomes right and vice versa. Some left-handed people find a mirrored mouse easier to use. Changing the operation of the switches can be achieved in one of three ways. The first and more permanent method is to open up the mouse (and thus kiss goodbye to any remaining warranty) and swap the wires controlling the buttons over.

According to the A500 manual, the necessary wires are 9 and 6 in the 9 pin D connector on the mouse. It's a fiddly job and the simplest way to do it is to cut and delicately resolder the wires and insulate them with a piece of insulating tape.The inside of the 9 pin D connector is small and you'll have to work with a surgeon's touch to be sure of a tidy job. If you're on the clumsy-handed side you might prefer to do the job inside the mouse. The mouse is held together with a couple of crosshead screws and, on opening, reveals an in- line connector whose wiring bears no relation to the D schematic showed in the manual. in order to identify which are the necessary wires to swap, check the colours against the 9D end.

Inside the mouse there's more room to work although that's no excuse for sloppy soldering and jointing. Take as much care as you can and make a discreet joint.

HOT WIRED

The second method is to open up the mouse and take the appropriate wires but instead of simply swapping the two buttons over, include a double pole, double throw (DPDT) switch in the circuit. This switch allows either the original circuit where left and right buttons are as they should be or a reversed situation where left is right and vice versa. The smallest DPDT switch from an electronics supplier is tiny enough to be mounted on the mouse and should be positioned at the top as shown in the illustration.

When mounting it you should be careful to position it in such a way as to avoid obstructing the bottom half of the mouse. When the two halves are re-assembled it will be a snug fit and as such must be positioned accurately. Measure everything very carefully before going ahead and making the necessary hole to mount the switch.

This will give you a mouse with an on-board switch that will instantaneously swap the left and right button control over.

PORTABLE BUTTON SWITCHER

If you want the switchable buttons but don't plan on doing any permanent harm or drilling holes in your Amiga rodent, the final alternative is an in line switch that connects to the mouse/joystick port of your Amiga. This plugs into the port and, using a DPDT switch, offers you the left hand alternative for the left and right mouse buttons. After the switch comes another 9D socket. The plug/switch/socket combination (as shown in illustration 2) offers a simply removable way of completing the task

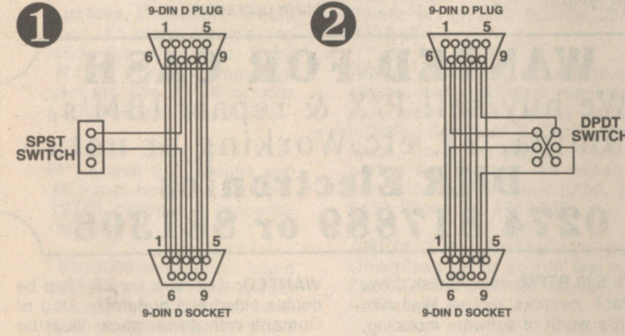
WHERE'S THE POINT?

Have you ever used one of those applications where the mouse pointer must remain in the same place for a long time with the ability to click still?

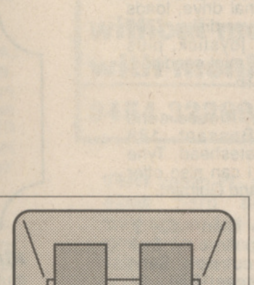
The problem with software like this is that if you knock the mouse it moves and you have to reset it. An ideal solution would be to find a way to disable the mouse pointer movement without affecting the buttons. A single pole single throw switch between a 9D plug and socket on line 7 (illustration 1) will do the trick.

MOUSE JOYSTICK SWITCHER.

A DPDT switch, two 9D plugs and a 9D socket wired in the manner shown in illustration 3 (and built into a tidy little box) will double up the mouse port on your Amiga to allow you to have a mouse and joystick plugged in at the same time. Either is accessible at the flick of a switch. ■



• Clockwise: The mouse imobiliser switch, the button switcher and the dual port switch to allow mouse and joystick to remain connected.



• Drill a small hole here to insert an on board button switcher.

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Simpson 0332 760353

YOU HAVE BEEN WARNED!

The Amiga is wired internally for software that supports a three button mouse. At least one reader has had problems with the internal connections supplied in the manual. according to the A500 User's manual (p A7) the pins for the mouse buttons are:

Pin 5	**Button 1**
Pin 6	**Button 2**
Pin 9	**Button 3**

This has led several people to assume that pins five and six are left and right buttons respectively. This is not the case. Pins six and nine are left and right. Pin 5 is the not often used centre mouse button. This is not implimented on Amiga mice although it is possible to attach a three button mouse.

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VISA

◆ ST

ATARI 1040STF and Hi-Res Mono Monitor with Microsoft Write word processor, Flair Paint, organiser, ST Basic, First Word. WilL not work with TV, hence no split. £360. Phone 0275 375496, evenings.

ATARI 529STFM, 1 meg Discovery pack, also £300 + games + word processor, Epson Daisy Wheel Printer + sheet feeder, 3 stick + mouse, + 12M/B utilities. Price: £300 the lot o.n.o. Split £250-£50. Ring 0323 22012 (weekends/afternoons).

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ST GAMES for sale. Please send SAE for list: Les Bessant, 188 Brinkburn Avenue, Gateshead, Tyne and Wear, NE8 43X. I can also offer help with Sozobon C and Gulham.

ATARI ST/STE PD, + Sten issue 3. DTP, WP, Art and Clip Art only. Disk catalogue issue 2.1 out now. Send disk + SAE to: Typecast PDL, 31 Hartfield Crescent, West Wickham, Kent. Disk + SAE for Sten issue 3.

STE SIMMS for sale upgrade 520STE to 1 meg. Phone Willie (Flat 3) on 041 339 8175 after 6

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◆ AMIGA

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WANTED, Amiga A500 +1/2 meg, 2nd drive + s/w. Will swap Super Famicom + Gradius III (Scart), also game gear. (no games) £85, both brand new. Please ring 0924 402430 or 407919. Ask for Steven.

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◆ PC

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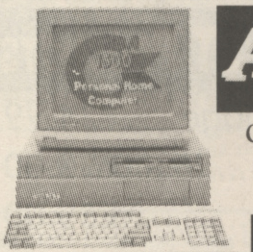

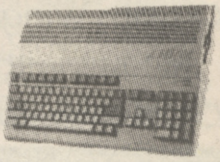

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NINTENDO 8-BIT, 5 games, 5Mb I +II, £95 inc p+p. Remote control car unwanted prize, £80 PC Engine, 5 games (boxed) £140. Also send SAE for C64/AMS tape, game lists dirt cheap. Details to: R. K. 4B Currents Lane, Harwick, Essex, C012 3DE.

ATARI Lynx for sale, brand new, still in box, complete with six games inc Blue Lightening and Slime World, only £150. Tel: 0604 751954. Mon-Fri 9-5. Ask for Paul.

VIDEO camera, Hitatchi HV-720 with lens C.C.T.V. survielance type, B/W, 600 lines resolution, Standard composite video out put, 240V mains. Imaculate picture (as new), ideal for digitising, £55. Tel 061 798 0456.

YAMAHA TX81Z Multi Timbral Rack Synth £195 o.v.n.o. Atari multiface £25 . Pro printer for BBC B £20. Tel Scarborough, Yorks. 0723 362440, after 6pm.

ADVENTURE PD! ST and Amiga. Games, maps, editors, solutions, etc. All disks £1.50 inc p/p. Write, stating which machine, +SAE to: J.R. Barnsley, 32 Merivale Road,Riding Brook, Stafford, ST17 9EB. (Mark envelope ST or AM!)

ATARI 400/48K, tapes cartridges books £25 800XL disk + happy tape mags etc. 800XL disk, page 6+ disks, sketcher, tape printer buffer many disks, Taxan Monitor. Offers please E/London 081 594 5768.

TANDY 1650 portable chess computer. No manual, 9 levels £9. Call (03985) 438 or write, 2 Town Mead, Oakford, Devon, EX16 9EW. Also got chess books for sale,

SWAP Technics Hi-Fi for Amiga or Casio Synth to swap for C64 disk drive. Tel: 0780 721 806, after 6pm. Ask for Glyn.

INSIDE Macintosh books or equivalent. Also any Apple Mac compilers or interpreters, including BBC Emulator. Tel 0925 50673 (Warrington).

IDE 3.5" 100Mb hard driver for PC/AT, brand new £250. Contact Gary 071 700 6342.

WANTED the following books for ST computers, Technical Reference Guides vol-1 VDI, vol-2 AES, vol-3 TOS. Also programming the 6800 by sybex. Phone 081 698 1719. Ask for Malc.

TRICOM LCI4/230 Multiplexer, no manual, hence £40. Tel: 081 995 0316.

BROTHER, 3.5" external floppy drive, S/S, battery powered, portable £25. Tel 081 995 0316.

ORIC user group - third meeting in Aylesbury, Sat July 13. Send SAE or phone evenings. Contact: Dave Dick, 65 Barnard Cr, Aylesbury, Bucks, HP21 9PW. Tel: 0296 26050.

WANTED, large composite monitor (colour) in good working order. (Gameboy), Spectrum, C64, Amstrad, games wanted, tape or disk, cartridge. 31/2 blanks wanted, around 30p each. Phone Steve (0628) 72275, 6pm +

ARCHIMEDES A3000 owners watch the skies. The Zelanties are coming! Prepare for the onslaught.

WANTED stackable disk boxed for 31/2 disks. Amiga PD, to swap or sell, send SAE for list. Blank 3 hour tapes wanted. To: Steve, 26 Reeve Road, Holyport, Maidenhead, Berks, SL6 2LS.

£5 REWARD. My Olivetti M10 doesn't have a manual and I don't have a clue. Give me a ring and I'll put money in the purse. Call W. Shakespeare on 071 703 1727.

TECHNICS Mash CD Player, NAD amplifier, mordant short speakers. Excellent condition, crystal sound, only £450 o.n.o. Tel: 0237 475262.

FEMALE contacts wanted with interest in computers, any age, Amiga only. Gameboy for sale with two games £60, (UK version). Electro plus one interface, very good condition £25 o.n.o. Phone (0628) 72275. Steve, 26 Reeve Road, Holyport, Maidenhead, Berks, SL6 2LS.

AMIGA 1.5 meg upgrade boxed, 1 month old. Will sell for £65. Also Blitz Amiga £15. Ring 071 735 1234 day. Night 081 658 8882. Ask for James.

WANTED: circuit diagrams and data for ye-data YD-280 51/4" disk drive. (EXICL computer). Also circuit diagram for Spectrum +2. Tel: 0665 577505.

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ST GAMES for sale. Please send SAE for list: Les Bessant, 188 Brinkburn Avenue, Gateshead, Tyne and Wear, NE8 43X. I can also offer help with Sozobon C and Gulham.

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TECH TIPS

Driven mad by a malfunctioning modem? Suffering from a desktop ailment? Discovered a miracle cure for a blind mouse? Not sure who married your aunt? Write to Keith Pomfret, Tech Tips, New Computer Express, 30 Monmouth Street, Bath BA1 2BW.

Floppy Yammy

Is it possible to connect up an Amiga/ST external floppy disc drive to a Yamaha CX5M MSX (MK1)? I know this sounds like putting a diesel in a Ferrari but It really would help me out a lot (access time from tape cannot be described as blinding!) and CX5M drives are now about as common as rocking horse droppings!

Also, have you any ideas as to whether Microillusions intend to write a standard notation sequencer into future releases of *Music X*. I know that modern computer music software opens up music to everyone but how about the old crusties who actually slogged our guts out learning the fiendish dots and cannot get on with these new fangled bar/grid jobs? Excellent mag! It is the only window on the vast computing world that is worth reading.

James Meehan, London

Unfortunately, the Amiga ST floppy drives won't weld on to your early MSX computer without a serious dose of techno-stuff that will cost more than the job's worth and/or befuddle a professional wirehead. Someone out there is bound to have done it and no doubt we'll receive several letters telling us how to do it by the next post but unless we're proved wrong, the verdict remains "keep looking the hen's teeth."

No good news on the MIDI music front either I'm afraid. For now you'll have to put up with the graph-like bar and grid format as the software publishers seem to think that there are more non muzos out there than muzos. I too learned music via the more traditional dots but have to admit that the grid format is more logical and if you persevere, I'm sure that you'll find it more appropriate for computer-music.

Hard stuff

Someone offered me four 10Mb hard drives for £10 each. He said that they came from an Apricot F series PC and would bolt straight on to an Amiga by connecting them to the floppy drive connector at the back. He said that if I chained them all together in a line, they would show up like floppies and as they were only 10Mb each they wouldn't need a special controller card. They seem like a bargain. Should I buy them.

Jason DeBeaujolais, Sidmouth

Your supplier is telling you fibs. The drives from an Apricot F series computer (which isn't a PC in the true sense of the word) won't work with your Amiga and certainly can't be 'chained 'out of the external drive port. My advice is to avoid doing business with this individual who is obviously more interested in his profit than your well-being. The computer world seems to be full of people offering obsolete drives to unwitting Amiga and ST owners.

If you want to avoid being ripped off, only buy peripherals from a reputable dealer or, if you must buy privately, be sure to see the hardware working before you purchase it.

1 blind mouse

The mouse on our Amiga began to stick and slip a lot after about six months of constant use. Because of all the stories we'd heard about the unreliability of Commodore's own product, instead of thumping the table at our supplier, we bought a Naksha mouse (which we'd heard good things about).

The Naksha mouse worked brilliantly until one day it was hanging over the edge of the desk and our cleaning lady trapped it in a draw severing it's tail. An important job was in hand and there was no chance of a replacement for at least four days. Out came the old Commodore mouse and as it was now out of warranty it was attacked with a screwdriver to see if it could be repaired by the family's amateur mouse-fixing team. The rolling ball was removed and the rollers examined. Where they came in contact with the ball, a gluey, sticky coating was apparent. A combination of tweezers, Stanley knife and cotton bud removed this and other debris like hair and grit.

The mouse was reassembled and worked as perfectly as it had from day one.

The moral of this tale is that you should check things before you replace them. All of this was months ago and the Commodore mouse is still going strong.

Mark Greatrex, Bowness

What you describe is the most common complaint and remedy for all mice. The mouse rolls across the table or mouse mat picking up any loose debris and most of that seems to get compacted and deposited on the rollers. It shouldn't be necessary to take the mouse apart to remedy it though. Removal of the ball from the trapdoor underneath should be enough to allow you access to the rollers. If you must use something sharp like a craft knife or scalpel, be very careful. A pair of tweezers should suffice for all but the most stubborn gunge.

Amiga BBS

I'm running a BBS at the moment on *TransAmiga* shareware and although it's very good it does have it's limitations. What I would

Manual modem

To get into comms with an Amiga I needed a modem, the shop prices were too high and an advert in the paper looked to be a solution. The local rag brought several offers of modems but the only one that I had ever heard of was a Nightingale. I bought the modem for £25.

There was no manual available and now I have found that I can't get it to work. I have tried several communication programs to no avail. These programs work with a friend's Demon IV modem.

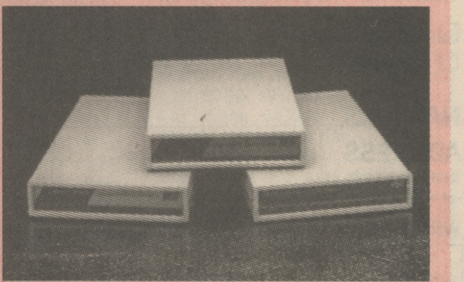
Because the Nightingale has no manual, I have used the Demon IV manuals but none of the Hayes AT codes will work. Someone at work with a modem from the Nightingale's manufacturer, Pace (The Linnet) has tried the software too and it works. Do I have to open up the modem and alter something to get it to work or am I missing something so obvious that it is staring at me?

Trevor Waller, Manchester

It is a fairly common mistake to not realise that all modems aren't Hayes compatible so don't chastise yourself too sternly. The problem that you're having isn't surprising as the Pace Nightingale is a manual and not an automatic modem.

This means that instead of typing AT commands at the keyboard, you set your software to 'on-line ' mode, manually dial the number and, upon hearing the modem tones when the line is answered, switch your modem to on-line.

With the Nightingale you've a data transmission speed choice of 300-300 baud (very slow) or 1200/75 (slightly less slow). You can also choose whether you originate or answer the call. If this is sounding a shade complicated, you should perhaps contact Pace on 0274 488211 and ask them the cost of a replacement manual for your modem.



• The Pace Linnet will talk for itself but if you've a Nightingale, you'll need to push a few buttons.

like is your opinion on the best software to run a BBS on on my trusty Miggy. The packages are expensive so I don't want to make a mistake and get the wrong one. I know the best software for a BB is on a PC but I don't want to go as far as getting a PC when my miggy would be quite capable of running a board with the help of a good package. Also do you think any companies would send me a beta copy of their software so I could try it before buying it? Do all the packages come with a bulkuploader for easy file entry? Please find time to answer this letter as I will be waiting for your advice. Keep up the good work!!!!

R.C Billington, Trafford

As you're already running an Amiga BBS, why not pull the board down for an hour and join the sysops of a few other BBSs using Amigas and have a chat on the advantages and disadvantages of their systems. After all, the Sysop of a BBS is the logical person to answer your questions and you'll find a comprehensive list of BBSs in *Express* On Line.

Serial killings

I am trying to operate a Genius mouse via a DiO-200X multi-I/0 card (supplied by Compumart), into an Olivetti PC1 (since this machine does not have a 'proper' serial port).

The Di0-200X has a number of links to enable configuration of the serial ports and this may be the source of my problems. A simple utility program that identifies various peripherals attached to my machine acknowledges the second port but the mouse test program fails to work.

I have already modified the PC1 to produce the required -12V for RS-232 operation and configured the software for the correct port but am still at a loss as to the cause of my 'dead' mouse. Any advice would be gratefully received.

D C Gill, Tyne & Wear

There's no simple answer to your question without examining the mouse, board and software although you should try installing and running the mouse on another machine to check that it works.

If it doesn't, the mouse is your problem. If it does, try installing the card on another machine and installing a couple of different mice. If you have documentation for the links on the I/O board, check that these are set up correctly. Otherwise, you could contact the board's supplier for these details. A less elegant alternative is to try each possible configuration of the links and work on deduction. If you draw each possible configuration of the links and tick each one off as you've tried them, you should get a result.

All Greek

On the back of my Archimedes A3000 there's a socket that says Headphones 32 followed by a drawing of a pair of headphones. I'm puzzled. Surely it doesn't mean 32 watt headphones or 32 pairs of headphones? Maybe it refers to a special sort of 32-bit headphones? That seems unlikely but maybe the horrible old analogue headphones from my Walkman aren't the right sort (although they do work alright). Perhaps you can tell me where to get these wonderful 32 bit digital headphones to take best advantage of my Arch's capabilities?

Michael Harrison, Southend

I thought that you were teasing me until I turned the office A3000 and there on the back, is a label as you describe.What it says is:

HEADPHONES
32Ω

The Ω sign isn't a drawing of a pair of headphones but is the Greek letter Omega which in techspeak is an abreviation for Ohms.

The 32Ω is a measure of the impedance in Ohms. Headphones with a quoted impedance of less than 32Ω shouldn't be used as they could damage the delicate circuitry. Headphones of above 32Ω won't do any harm although the amplitude and quality of the sound could be affected.

As for 32 bit digital headphones, we'll wait until we're issued with a 32 bit digital head ...

PCW/ST prints

I have an Atari 520STFM and my parents own an Amstrad 8256. I would like to be able to print out program listings etc on the ST but cannot afford a printer. Is it possible to connect the 8256s printer to the ST. If so, do I need any extra leads?

John Patterson, Consett

The printer provided with the Amstrad 8256 is a 'dumb' print engine and as such will only work on Amstrad PCW series computers.

Normally a printer contains the print engine and an interface for connection to compatible computers. With the Amstrad CPC's this was different. The interface is part of the computer and the signals sent to the printer are already processed for the printer engine. A year or so ago, someone claimed to have built an interface to allow other computers to share a PCW printer but considering the quality of the printer, which is a fairly basic dot matrix 9 pin beast, it's probably a better idea to save up the fifty or so pounds necessary to buy a parallel dot matrix printer from a bulk distributor.

"Fifty quid, is that all?" I hear you scream. I tell you no lie. As recently as a month ago, Crown Computers on 0704 895815 were offering printers at under fifty sovs.

Topsy Turvy

Some weeks ago I bought a 3.5 inch external 1 megabyte disk drive for my Atari STFM. I had already changed the internal half megabyte drive for an internal one megabyte drive.

The new external has its own power supply and, of course, plugs into the Atari.

However on power up, although drive B (external) would start up and run, it always ended with the message "Drive B not responding".

I took it back to the local shop and they checked it and declared no fault.

I finally became so fed up with it that in spite of the warranty I opened it up.

Inside there was a loose on off switch and the edge connector wasn't connected correctly. I put these right and found that the drive worked OK without the case.

Finally, inspiration! I decided that it would work fine upside down.complete with case.So I put the feet on the top, turned it over and Bob's your uncle. How do you figure that one?

Eric Hornby, Baldock

Simple. Robert married my Auntie Audrey so Bob is in fact my uncle.As to the upside down disk drive, I can't think of an answer unless you're playing the *Neighbours* computer game ...

PC publisher

What is the best DTP machine I can get which doesn't include workstations, mainframes or Macintoshes and what is the closest to an industry standard program to run on it.Also, what will it cost me?

Mel Gunnard, Plymouth

A powerful PC (286, 386 or 486) with a VGA display a huge hard drive, loads of memory and a software package like Ventura or Pagemaker would probably be ideal. To get good page proofs you'd need some sort of laser printer (preferably post script) That little lot should gobble up the lion's share of £4000. ■

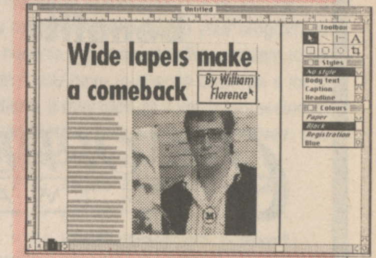
Publish and be damned

I am in the process of deciding what hardware to buy for doing mostly desktop publishing. I have read numerous reviews over the last 6 months and finally decided on the Macintosh IIcx with *Pagemaker*.

I have now just finished reading two more reviews about the NeXT work station and would be grateful if you could tell me whether it would be worth my consideration. I know very little about UNIX or if it has any limitations.

I intend to print small sales catalogues which will be mostly graphical.

Mike O'Neill, Glos



• Is this really making the best use of high quality DTP software and hardware?

DTP is a matter of choice. You've chosen the right machine with the Macintosh and if you've seen it running *Pagemaker* , and that suits you, go for it ... At *Express*, we use Mac for all of the DTP but chose Quark's *Express* as the software for its features and ease of use.

If you know someone that already uses DTP software and is prepared to put up with "How do you do that" questions in the quiet hours, choose the software that they are familiar with. It will give you more help in the long run.

If you're set on a Mac as the machine to use, your DTP choice is Pagemaker, Quark, Ventura and 3B2. There are others but we don't know enough about them to offer you advice.

The NeXT machine that you are considering is a high level work station with many excellent features (and it comes from Steve Jobs, father of the Macintosh). Unfortunately it hasn't caught on in a big way yet and we're still waiting for

1. A review machine
2. Some nice DTP software to put it through its paces
3. User feedback

All of which is a pity when you consider that the speed and processing power of the NeXT coupled with its ability to do Post Script emulation on screen are ideal for DTP.

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Want to know how to make life easier for yourself? Mary Branscombe shows you how to understand the programs you wrote last year.

When you start a program, your initial objective is to get it to work. Once the code does what you want it to, you can spend some time making it more efficient or extending it to deal with more situations.

If the program is more than a few lines long, if you will ever want to use it again, or if anyone else will need to use and adapt the code, you should also think about writing the program to be easily understandable.

As well as using comments and thinking about variable names, you should look carefully at the structure of your code and the constructions that you are using to try to make the program easier to understand.

Writing your code so that it splits easily into sections that you can separate with blank lines involves breaking your program down in to sections or modules. Each module should contain one idea or one step of the program.

For example, a small program, to add a list of numbers or print messages to the screen, has one or two main ideas to solve a single problem. A larger program does not solve a single problem; it will be made up of the solutions to lots of small problems. The most difficult part is to fit all the small sections together.

- If each section of the program is written as an independent module then it is much easier to see what is going on.
- To make a section of code into a module, write it as a sub-routine, a function or a procedure, depending on the language.
- A module should be independent of the rest of the program so that you can re-use it.

Writing a program as modules of code separated by blank lines lets you see the structure of the program very easily. Another good way to show the structure of a piece of code is to use indenting. When you use BEGIN and END statements in Pascal, they are there to help the compiler, but they also show anyone reading the program which commands go together. You should indent the commands between BEGIN and END:

```
    IF x > y THEN
BEGIN
    x := x + y
    WRITELN ('x is greater than y')
END
```

You can indent an IF statement to show how it works:

```
IF x > 0
THEN
    PRINT “positive value ”
ELSE
    PRINT “ not a positive value”
```

This should be clearer than:

```
IF x > 0 THEN PRINT “positive value” ELSE
PRINT “ not a positive value”
```

This is much more important when you use an IF statement as part of another IF statement. If you write:

```
IF condition1
THEN IF condition2
THEN command1
ELSE command2
```

you must know how the language you are using deals with IF statements to know what will actually happen.

In Pascal, the ELSE statement has to go with the inner IF statement. It is much easier to understand what is going on if you indent the code:

```
IF condition1
    THEN IF condition2
        THEN command1
        ELSE command2
```

The indentation shows you what is going on at each level of the program - command1 and command2 are the two things that can happen at the level of the second IF statement.

Because nested IF statements of this sort can be confusing, you might want to organise your program so that you don't need to use them. Another problem to be aware of is that if you have to choose between a lot of different conditions, it may look as if you have nested IF statements when there is only a list of alternatives. It is much better to use a CASE statement, like:

```
CASE n OF n < 0: PRINT “negative number”
CASE n OF n = 0: PRINT “zero”
CASE n OF n > 0: PRINT “positive number”.
```

It is quite clear what is happening here and that means that this is one less section of the program to work out.

You can often find that you have a choice between something confusing and something that is more long-winded but clearer. In C, there is a very terse FOR construction:

```
FOR (i = 0; i <= 100; i = i + 1)
    {PRINT “next number is”,
    PRINT i
    }
```

This is rather obscure but it simply prints the numbers from one to 100. It makes life easier for everyone if you use:

```
 i= 0;
while(i <= 100)
    {PRINT “next number is”,
    PRINT i
     i = i + 1
    }.
```

WATCH THE SPACE!

The only spaces that you need to put in to your programs are the ones between words. You don't even need to use new lines if you don't want to; you can use a semi-colon instead in many languages.

This can be useful if you want to group related statements together. There is nothing wrong with putting a WRITE and a READ statement on the same line, because they are part of the same concept; getting data from the user.

It is rather different if you put unrelated statements on the same line, because this can make the program confusing. What you want is for each step of the program, each individual idea, to be separate on the page or the screen, so that you can see what is going on in the program as soon as you look at it.

You can separate lines and sections of the program with as much blank space as you like. You can put a blank line between separate parts of the program and leave several lines before you include any procedure definitions that you are using. The compiler or interpreter that reads your program will ignore blank spaces unless you put them in the middle of a word or an operator - so you can't write `: =` for `:=`.

You should put blank spaces around + and - signs, to make your arithmetic easier to read. You should find it easier to calculate:

`34 + 67 * (33 - 7) + 21`

instead of:

`34+67*(33-7)+21.`

Brackets will help a lot if you are including formulae in your programs, if only to remind you that multiplication will be done before anything else.

THE VERDICT

In general, you are trying to make life easier for yourself and other programmers. You will go a long way towards accomplishing this if you keep these five points in mind:

1) Lay the program out on the page so that you can see what goes where.

2) Don't be afraid to put in enough space.

3) If in doubt, make it simple.

4) If you find a construction difficult to use, the code will be difficult to understand.

5) However simple you make the program, put the comments in to tell everyone what is happening.

Not finding things quite this simple? Write to us about programming at 30 Monmouth Street, Bath BA1 2BW.

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GAMES DOMAIN PD – Amiga Computer Games only. £1 each including postage and packing send stamped addressed envelope to 22 Broadwater Crescent, Stevenage, Herts, SG2 8EQ.

ATARI 1 SHAREWARE – From performance PD, Helenville School Road, Coldineham, Berkshire, TD14 5NS. All shareware £2.99 each. Two hundred for sale.

AMIGA PD CLUB SWAP – Free PD for Amiga Plus 'swops', hundreds of titles and UTILS. Join free. Send blank disk or 50p for catalogue to: Frank Armstrong, Glenwood House, St Mary's Road, Eccles, M30 0BA.

CLUB AMIGA – 24 hour telephone helpline, newsletters, cheap PD contacts service etc: Send SAE for more info: Club-Amiga, 5 Bowes Lea, Shiney Row, Tyne and Wear.

PRESTIGE AMIGA GAMES (UK) – Amiga Games for sale or exchange. Large PD Library. Send SAE for full list to K Harvey, 67 Waverly Road, South Benfleet, Essex SS7 4AX.

TRIPLE X – We are the only PD Library dedicated to ST Adult Software! £2 per disk. Write for your free catalogue, also other software available! Triple X, Babak Ghaxi, 3 Lansdowne, Carlton Drive, Putney, London SW15 2BY.

MG SOFTWARE – £2 per disk of Atari ST Public Domain. Send me 95p for my catalogue of great stuff. Mark, MG Software, Connerways, Beckingham Street, Tolleshut Masor, Essex M9 8LL.

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POSTSCRIPT USERS GROUP – JP McKeown, 3 Pedn Moran, St Mawes, Cornwall TR2 5BA.

NORTHERN IRELAND AMIGA USERS – Send £2 for disk-based newsletter. Tips, news, reviews etc. NIAU, 98 Crebilly Road, Ballymena, County Antrim BT42 4DS.

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AMSTRAD CPC HOME USERS – Steve Williams, WACCI, 9 South Close, Twickenham TW2 5JE. Tel 081-898 1090

AMSTRAD LOCAL GROUPS - Amstrad Groups Federation, 4 Sutton Road, Gorton, Manchester

AMSTRAD PC SOFTWARE - Colin Smith, Colbar, 10 Penwood cl, Westbury, Wilts BA13

AMSTRAD PCW - Bob Ellis "Rowan" 100 St Peters Close, Moreton-on-Lugg, Hereford HR4 8DW. 0432 761 860

AMSTRAD 1512/1640/PPC - PC Independent User Group, The Computer Advice Centre 87 High Street, Tonbridge, Kent. Phone 0732 771 512

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APPLE II USERS – tel 051 9284142.

APPLE MACINTOSH. John Lewis, Macintosh user group, Macintosh House, 11 South Parade, Summertown, Oxford OX2 7JL

APPLE SYSTEMS – Irene Flaxman, Apple 2000, PO Box 3, Liverpool L21 8PY.

ARABIC COMPUTING – Rich Lackey, Arabits, 9 Bellview road, Worthing, West Sussex BN13 1EY

ATARI ALL MACHINES – Colin Hunt, BaPAUG, Wimborne Road, Oakdale, Dorset BH15 3EF

ATARI AND ST PC EMULATOR SUPPORT CLUB – SAE to 153 Parrock Street, Gravesend, Kent, DA121ER

ATARI PORTFOLIO - D Gilpin, Atari Portfolio User Group, 84 Cambridge Avenue, Gidea Park, Romford RM2 6QU. 0708 730764

ATARI ST DIY HDISK BUILDERS CLUB – information on how to build from scratch an HDisk system for your ST. Help given on what you'll need and how to connect it all up. Call 0495 272092

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BBC MICRO - BEEBUG, 117 Hatfield Road, St Albans, Herts AL1 4JS. 0727 40303

BASIC PROGRAMMERS' GUIDE – for all BASIC programmers. Phone Andy on 081-648 4326.

BATPUG – Turbo Pascal user group also open to other PC Pascal programmers. Costs £10 per year. Write to 12 Clegg Avenue, Cleveley's, Blackpool, FYS 9BJ. Send an SAE for sample.

BOMB OUT BROS – A new ST PD coding group wants new members to help expand our range of games, demos and utilities. Write to Adrian Speight, 25 Gilbert Crescent, LLanelli, Dyfed.

BRIDGE CENTRE AMIGA CLUB – A club not just for Amiga users but anyone who wants to become familiar with the Amiga. All age groups welcome. Games, music and educational software. PD software £1. Membership £3 a year and an additional 20p every Friday. Come to our meetings at the Bridge Centre, Haddington, East Lothian, Scotland every Friday.

C64 PD CLUB – E Masaba, 84 Garmoyle Rd, Liverpool L15 3JH

C USERS GROUP – Francis Glassborow, 64 Southfield Road, Oxfoed OX4 1PA. For everyone interested in the C and C++ programming languages. Publishes a bi-monthly newsletter.

CAMBRIDGE Z88 - Roy Woodward, Z88 Owners' Club, 68 Wellington St, Long Eaton, Nottingham

CD ROM - UK CD-ROM User Group, High Wings, Salem, Treforys, Abertawe 0792 844 370

CHESHIRE 16-BIT USERS CLUB – Amiga, ST, PC, Arc at Radley Common community centre, off Poplars Avenue, Orford, Warrington, Friday nights. All welcome. £1 admission.

CHESS COMPUTER PROGRAMMERS and interested players send an SAE to Steve Roe, 25 Nene Walk, Worksop, Notts or ring BBS 0909 479080

CHOICE – on-line help. Tel 0308 23224

CHESHIRE NIMBUS USER GROUP – Geoff Nelder, Queens Park High School, Handbridge, Chester

CHURCH ADMINISTRATION - Rev Stoker Wilson, Church Computer User Group, St John's Vicarage, Greenside, Ryton, Tyne & Wear NE40 4AA. 091-413 8281

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CLERGY/MEDICAL EDUCATION – Mr T Jones, FREE-ED Shareware/PD 85 Stoke road, Taunton, Somerset TA1 3EL. Tel 0823 321 481

CLEVELAND AMIGA CLUB – Thought our Amiga scheme should get organised. Tel 06542 252133 and ask for Barry or write to 30 Aske Road Middlesborough, Cleveland, TS1 4DA. No lamers. Hope to start PD club and fanzine.

CLUB AMIGA answers your questions on software and hardware on its 24 hour helpline. Join now. Send £5 to Club Amiga, 5 Bowes Lea, Shiney Row, Tyne and Wear DH4 4PP.

COBOL LANGUAGE - Allen Reavie 22 Mourneview St, Portadown, Northern Ireland. BT62 3AW

COLECO ADAM - Keith Mamer, UKAS 33 Homer Road, Croydon CXR0 7SB

COMMODORE ALL MICROS - Jack Cohen, ICPUG, PO Box 1309, London, N3 2UT. Tel 081-346 0050 after 6pm

COMMODORE 64 CLUB has been on the go for the last five months and new members are welcome. For more details send an SAE to The C64 Club, 20 Finlow Place, Dundee, Scotland

COMMODORE AMIGA - UK Amiga Users Group. Contact 144 Charles Street, Leicester LE2 0OD. Telephone 0533 510066 voice; 0533 517615

COMMUNITY COMPUTING - Community Computing Network 2nd Floor, 35 Pink Lane, Newcastle, NE1 5DW. Tel 091-261 0317

COMPUCORP. Compucorp University users group c/o Compucorp, Cunningham House, Westfield Lan, Kenton, Middx

COMPUNET – write to Independent Compunet Club, 148 Furzehill Road, Boreham Wood Herts. WD6 2DX

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CPM & MSDOS Users Group – 42 Birkbeck Road, Wimbeldon, London SW19 9NZ. Tel 081-543 0824

CRYPTOGRAPHY & CODES - Mike Barlow, American Cryptogram Association 5052 Chestnut Avenue, Pierrefonds, Quebec HBZ 2A8 Canada

DATAEASE USER GROUP – High-Tech House, 10 Blackfriars Street, Norwich, NR3 1SJF

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EMULATE. For Amiga, Amex. Monthly newsletter. Write to Pat 12b Northbrooks, Halrow, N Essex

ENTERPRISE – William Creaser, 6 Provident Street, Shaw, Oldham, DL2 8AQ. Independent Enterprise User group. Tel 0706 881382

ENTERPRISE - Tim Box, Independent Enterprise User Group, 50 Holdenhurst Avenue, Finchley, London N12 0HX. Tel 081-346 8032

ENET (like Econet) - T K Boyd, Enet (Amcom) User Gp, Seaford Cottage, Petworth, West Sussex

FIND YOUR LOCAL CLUB – British Association of Computer Clubs. Database of all user groups in the UK. Banc y rhosyn, 14 Bron Y Glyn, Bronwydd Arms, Carmarthen SA33 6JB.

FORTH Language – Douglas Neale, FIG (FORTH Interest Group) UK, 58 Woodland Way, Morden, Surrey SM4 4DS

FRACTALS/CHAOS THEORY - Andy Lunness, 69 Bronte Avenue, Bury, Lancs BL9 9RN. Telephone 061-764 6469

GENEALOGISTS - Computer Group, Society of Genealogists, 14 Charterhouse Buildings, London EC1M 7BA. 071-251 8799

GENERAL HOME MICROS - Steve Winter, Chic Computer Club, PO BOX 121, Gerrards Cross, Bucks SL9 9JP 0753 884473

GEOS USER GROUP – for C64 and 128 owners. Disk based magazine. Send blank disk to GUG (UK) 110 Deansway, Woodloes Park, Warwick CV34 5DQ

GUG (UK) – GEOS User Group for C64/128. Also non-GEOS PD library. Send disk and return postage for GEOS, SAE for non-GEOS to GUG (UK), 110 Deansway, Woodloes Park, Warwick CV34 5DQ

GROUND FLOOR USER GROUP – support for all serious users of PC, ST, Amiga and PCW. Meets monthly in Calderdale, West Yorkshire. Further information from Jae on 0422 844991 days or 0422 845789 eves.

GAUGE - Martin Houston CUG (UK) Houston Technology Ltd, 14 Arden Oak Rd, Sheldon Birmingham BS26 3LX. Telephone 021-722 3168

(To be continued next week.)

SPOTLIGHT ON GOODMAN PD

Established over four years ago, Goodman Pd is the largest ST PD library in Britain. It incorporates the official STOS shareware service and was voted Shareware Service of the Year for 1990.

The range of software it covers is quite phenomenal with everything from the usual games and demos to music and MIDI programs, utilities and clip art.

Software is constantly updated so that you can be sure that you won't be buying programs that are two years out of date.

Basically if you want it, Goodmans will have it.

The catalogue, an impressive tome produced on ST Desktop Publishing software, costs £1.95. You can also find out what the library has to offer over the phone using the 'Goodman Gateway', a service on the Bath BBS.

To obtain the spring/summer catalogue write to Goodman Enterprise, 16 Conrad Close, Meir Hay Estate, Longton, Stoke-on-Trent ST3 1SW. Or you can phone the library on 0782 335650.

SHOPPING EXPRESS BUYERS' GUIDE

While *Shopping Express* is undoubtedly the perfect way to track down the best bargains in the computer world, many people are still, perhaps understandably, wary of buying products via mail order or through personal ads. This is probably because usually you are not able to have a look at what you are purchasing before you hand over your money.

We do everything in our power at this end to make sure that all the advertisements we run are above board. But here are a few tips designed to help take the risk out of buying via mail order or over the telephone.

- **Be precise in describing what you want to buy. Leave no room for error. Feel free to go overboard in double checking details – make, model, specifications, colour, size, the page number and name of the magazine in which you saw the advertisement etc.**
- **Confirm the exact price of the article you are buying. If you are phoning a company check if there are any hidden extras, such as postage and packaging.**
- **Check how the item will be delivered to you and how long it should take. This is especially important with reader ads where delivery details are rarely mentioned.**
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- **When dealing with companies it is best to to pay by credit card, especially for items over £100, as this provides extra cover under the credit card companies' own insurance schemes. Otherwise use a crossed cheque or postal order. Avoid sending cash at all costs.**

THE PD COLUMN

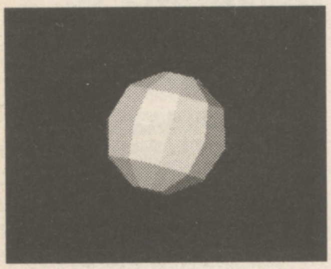
More Public Domain doings from Mr. Cheap Skate himself, Frank O'Connor, with the ultimate Amiga demo, some simple ST circuits and a landscape creator...

Amiga demos are thick on the ground these days, but none of them could truly be described as indispensable, until now. The latest Phenomena demo was sent this way by the boys at Capricorn Computer.

It features some truly top-notch programming, including a couple of tricks most of us thought were beyond the Amiga. The whole demo is accompanied by just about the best original soundtrack you'll ever hear on an Amiga.

The music seems to be, for the most part, performed by the Amiga itself, which is unusual because Amiga demos generally rely on sampled music. The sound chip really outdoes itself here, but most of the sonic credits are due to the skill of the musical programmer.

The demo is really a massive exercise in self congratulation. Demos, by their very nature, are places where programmers get the chance to show off. Most of this baby is accompanied by a scrolling message explaining just why some of the graphics are so difficult to produce with any measure of polish.



• Phenomena: looks and sounds a treat.

The piece starts off with a "strange cube". At first it looks very banal, a square containing a scrolling starfield. However, things soon change. As the cube rotates through all three axes, the other sides reveal spinning vectors, filled and wireframe. You end up with four distinctly different graphical techniques all contained in one object, and all running beautifully simultaneously.

Next comes a truly glorious vector demo. Filled objects travelling through a very splendid and convincing light sourced world. The vectors themselves are bog-standard filled efforts, they move smoothly enough, but the most impressive thing is the amount of colour used. The ground fades realistically towards the horizon and the object's shadows are affected by "camera" movement.

Just when you recover from that, you are shown three versions of a bouncing sphere. The first is composed of dots, the second is made up of wire frame polygons, but the third is built from, and I quote, "41 light sourced polygons" all solid and filled. It looks quite breathtaking in motion and moves at incredible speed.

> 'A snake of green spheres wind their way through a magnificent pool of Mandelbrot shaped liquid'

The piece de resistance of the video however, is the ray traced fractal. It really is quite mind blowing. A snake of green spheres wind their way through a pool of Mandelbrot shaped liquid. It has to be seen to be appreciated.

The programming throughout the demo is very impressive and it is from this sector that future greats in programming will emerge. If software companies had any sense, they would be headhunting talent from demo creators in Sweden and Italy. These guys really deserve some recognition.

ST DOES THE CIRCUIT

What I know about circuits you could write on the back of a stamp with a thick felt-tipped pen, but even I was impressed with the simplicity of the circuit designer from Caledonia PDL.

The program will run only on mono STs, but includes a very useful mono emulator for all you poor and neglected colour users...

You have a very wide range of options at your disposal including an incredible array of editing features. The main screen is the symbol selection stage. Here you choose the relevant circuit component, be it a transistor, a resistor, capacitor or diode.

Once chosen you return to the initially blank circuit board. You can define the shape of the circuit board before you

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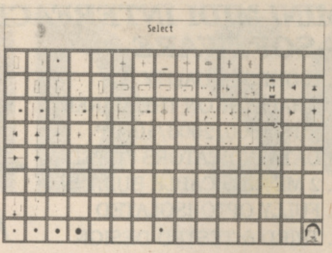
begin, be it a circle, square or triangle. The selected component is then placed anywhere you choose and you can begin to design your own boards.

The editing features include a very useful magnification utility, invaluable when the screen starts to get a little crowded. Connecting the various components is as simple as pointing and clicking. You drag the component to where you think it should go and drop it there with a press of the mouse button.

The system looks much like the GEM desktop and is quite intuitive. Even an electronically ignorant simpleton like myself soon had complete circuits built.

It appears that all of the relevant circuit components are included on the selection screen, including a few odd characters which aren't actually circuits.

If you wish to add text to your circuit diagram, in way of an explanation or title, then you can do so by using the text editor function.



• Circuit City: simple way to build circuits

The program is wholly professional! and a joy to use. It reeks of the quality you would normally expect from a full price package, let alone PD. Tremendous, and highly recommended.

WHY IS PD SO FREE?

A number of readers have contacted me to ask how it is that good software can be so cheap on the Public Domain. I thought it would be appropriate to set the record straight.

The PD scene has produced some truly excellent software over the years which is why it's so odd that software of such obviously high quality has been ignored by the large publishers.

It is often the first stepping stone for professional writers. Many now famous programmers started their careers showing off in the Public Domain. Their success is usually due to their own efforts and not talent spotting on the part of software houses.

In many cases, the software has already been presented to just about every publisher around, but the subject matter or the implementation of the program have been deemed unsuitable for publishing by the powers that be.

It is for this reason that most of the really good stuff has covered obscure subject matter, such as demos, Mandelbrot sets and disc utilities. The standard of software in the PD scene is almost directly related to its status as either completely free PD, or, alternatively, as low cost Shareware.

Also, new writers feeling their way around are often to be found writing games which are, shall we say, similar to commercial products. The similarity precludes them from a normal publishing deal, but nobody usually minds seeing a "rip-off" on the Public Domain.

Even so, when a title of really outstanding quality comes along, it begs the question; why isn't this in the shops? A question you would be well advised to totally ignore because, while we're getting the stuff for nowt who's complaining? Long may it continue. ■

INTRODUCING THE STUPID FLOWERS

ST owners will be pleased to hear about a new PD company, Stupid Flower. The new kids on the block sent me a disk containing lots and lots of very useful demos and utilities. They were also kind enough to send us a personalised sample copy of the Goldnugget disk, so thanks guys, we appreciate it.

Perhaps the best thing on the disk (which is strangely titled the Captain Goldnugget disk) is the superb fractal landscape generator.

This allows you to play God for a bit and design your own random worlds (well, bits of worlds anyway). The program starts off by defining an example fractal landscape, it then goes on to allow you to input the factors required to create a scene.

The landscapes created have that very distinctive fractal look, it seems on first viewing to be completely natural, but there's something odd about it...

They include mountains, valleys and lakes, even snow on the mountain tops. The effect is initially grand and spectacular, but on a deeper basis it gives some insight into the real order of chaos in the universe...wow man. (Are you sure about this? -Ed)

WHERE TO GO

Caledonia PDL has really swanky range of Public Domain software for the ST range and can be contacted at; Caledonia PDL 250 Oldtown Road, Hilton, Inverness, IV2 4PT, or tel. 0463 225736

Check out Stupid Flower's range at 3, Read Meads, Glastonbury, Somerset, BA6 8DN.

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HAND SCANNED!

Hand scanners are an ideal way of placing photograph quality images into your graphics packages. David Golder checks out the quality of the DAATAscan Professional.

If you want to use a photograph or drawing in your graphics package the easiest way to get it there is with a scanner. Hand held scanners are particularly useful to the Desktop Publishing enthusiast as they provide a cheap and quick way of incorporating hard copy logos and pictures into their own work.

The DAATAscan Professional is a complete mono hand scanning package for the Amiga from Pandaal Marketing (0234 855666). The package comprises the scanner itself, an interface cartridge for connecting the scanner to the Amiga, a power supply unit and specialised DAATAscan Professional software.

It is simple to set up; wiring up the plug is the only thing which takes some time. The scanner connects to the Amiga via the parallel port. This can be a bit of a pain if you want to print out a scan to see how it looks as a hard copy since you will have to disconnect the scanner and reconnect the printer.

> **"One of the best features of DAATAscan is that you can watch the image build up on screen in real time as you scan."**

The actual scanner is not manufactured by Pandaal, but a company reknowned for making high quality scanners, Marstek. This is a normal state of affairs for hand scanning packages, but the DAATAscan professional scores over its rivals because Marstek's scanner is just that bit more refined than most. For example, it has an extra roller at the back to make it easier to keep the scanner moving in a straight line. It also has a little LED indicator to warn you when you are moving too fast.

It can scan in four different resolutions from 100dpi to 400dpi. Scans can either be in black and white – suitable for line drawings – or else one of three modes for varying simulations of grey scales (see accompanying panel). The higher the resolution and the scan mode the more slowly you will have to move the scanner.

The software, which has been produced by Pandaal, is also a notch above the competitors. The main working area has three windows; one contains the commands – such as scan, load image, save image, print etc – the second has all the variables you have to set before you can do a scan and the third is the image window where completed scans appear.

PREPARING TO SCAN

To scan a picture you have to set up the size of the scan and the resolution then click on the scan item. The screen goes completely blank apart from an information line at the top and the scanner comes to life. One of the best features of the software is that you can watch the image build up on screen in real time as you scan; the image will fill the screen from the top downwards as you move the scanner. When it reaches the bottom the image will wrap; ie begin again at the top of the screen.

When the scanning is complete the picture is displayed in the image window of the main working area, or, more usually, part of the picture. One of the most annoying aspects of the software is that, unless the area you have scanned is very small, you cannot view the whole picture at once. Instead the operator has to move around it using a cumbersome positioning tool. It would be handier if you could view the whole image, not to judge its quality, but so as to make moving around it for editing purposes a lot easier.

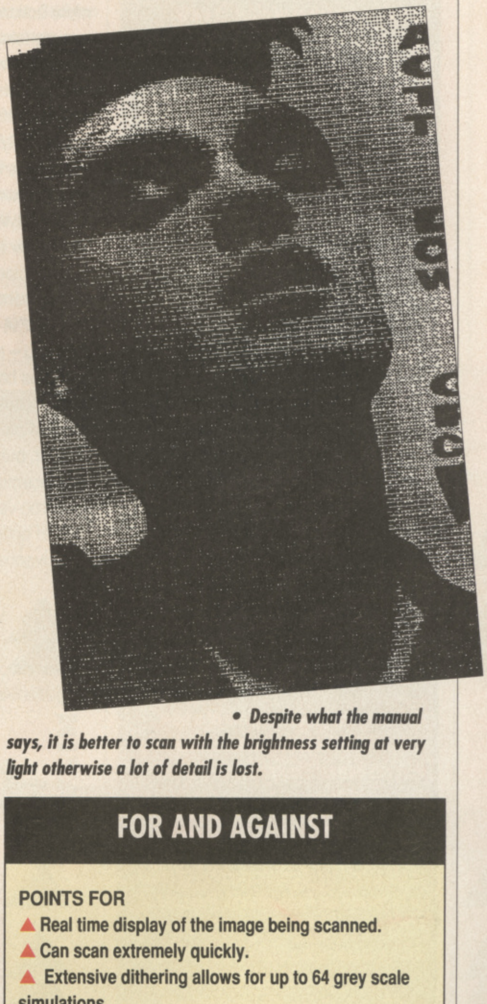
PLAYING WITH THE IMAGE

DAATAscan has some pretty impressive editing features. You can invert the picture, flip it around for a mirror image, turn it upside down and even cut and paste sections. While you cannot draw or paint anything on the image – DAATAscan is not a paint package – you can zoom in to a pixel level and switch a dot from black to white or vice versa to 'clean up' the image.

All scanned images can be saved as .IFF files, the standard file format for most graphics related Amiga packages such as Deluxe Paint and Photon Paint.

The manual is fairly informative, but lacking in the hints and tips department. For example, it advises the use of the middle brightness control on the scanner as being best for most scans, which is incorrect. For the most part obtaining the best results is a matter of trial and error. At £161 plus VAT the DAATAscan is slightly more expensive than its competitors, but this small difference certainly seems worthwhile. ■

• The DAATAscan hand scanner here scanned in by itself.



• Despite what the manual says, it is better to scan with the brightness setting at very light otherwise a lot of detail is lost.

FOR AND AGAINST

POINTS FOR

▲ Real time display of the image being scanned.

▲ Can scan extremely quickly.

▲ Extensive dithering allows for up to 64 grey scale simulations.

▲ Good quality results.

POINTS AGAINST

▼ Manual lacking in tips and hints.

▼ Software has no correction facility if you make mistake.

▼ You cannot study your whole scan in one window.

DITHERING DETAILS

High quality scanners use grey scales to create images of photographic quality. As opposed to having groups of dots which cluster together to make darker areas and spread further apart for light areas – as with a newspaper picture – there are actually different levels of grey.

Like many other hand scanners, though, the Daatascan does not have the facility for grey scales, but instead uses a system known as dithering. This is controlled by the Scan mode switch on the side of the scanner. This simulates grey scales by the way it arranges the dots. Higher dither settings are used for finer quality images, while lower settings can end up looking bitmappy, but are better for more simple line drawings and black and white logos.

The DAATAscan can simulate more grey scales than many of its rivals; up to 64 in 300 and 400dpi resolutions and 16 at 100 and 200dpi.

BUBBLING UNDER

● Ed Scio, co-designer and programmer of the chart-topping, *Armour Geddon*, is already working on his next project for publisher Psygnosis. The, as yet untitled, flight simulation centres on the F-14 and F-18, with a war-time scenario affected by the player's peformance in a series of missions. "There'll be two different modes," Scio reveals. "A simplified mode for arcade players and one for people who like real flight simulations. There'll be loads more weapons options, and a serial link option so two players can fly the two planes." Ed's looking to complete his latest venture in early 1992.

● There's good news for fans of axe-wielding Conan-alikes ... Palace Software is producing a second sequel to its best-selling beat-'em-up Barbarian. *Barbarian III* may not be so-called when it appears on the 16-bit machines early next year, but at least Commodore 64 owners fearing for the loss of software development for their machines need not despair – Palace is producing a version of *Barbarian III* for Commodore's ageing 8-bit baby.

BARBARIAN II

• Axe a silly question and be prepared to have your head caved in.

● Strangeways is the name of a new software development team comprising four old hands: Douglas Hare (former Compunet user/programmer and author of, amongst other things, *IO* on the Commodore 64), Gary Liddon (who has to his credit the Commodore 64 version of *Ricochet* for Firebird and *The Last Ninja* on the NES), Jason Perkins (whose sizeable portfolio includes *Thing On A Spring* on the Commodore 64), and Paul Docherty (who recently put pixel to screen for System 3's 16-bit versions of *Myth*). Most of the quartet's work is console-based, so there's little chance of any of us seeing anything for some years yet. However there is one home computer release in the pipeline.

Games Week

Riding along on the crest of a software wave, Gary Penn surfs up the news, views, previews and reviews of the latest happening items...

FLIGHT SIM NEWS UPDATE SPECIAL

Flight simulations seem to be very much in vogue these days. This can be partly attributed to the recent Gulf War – it certainly had some influence on the sales of related products while the conflict was in progress. It's more likely though that this form of entertainment is bought for its perceived depth gameplay.

I'm not a great fan of hardware-orientated simulators. All that banal button pushing to take off and stay in flight... it sucks. In many cases a few aural rewards would help, as would some more action-packed missions. It's all too easy to take realism to tedious extremes, which is why I prefer arcade-style simulations such as ***Jetfighter.*** Perceived realism is the key – how we expect a fighter to fly (hard and fast suits me), even if it is inaccurate.

By complete coincidence, Velocity's arcade-style simulation sequel to ***Jetfighter*** is now available for the PC compatibles via US Gold. ***Jetfighter II*** comes from Bob Dinnerman, the man behind ***F/A-18 Interceptor*** for Electronic Arts and – surprise – the first ***Jetfighter*** (which is basically a remix of sorts of ***Interceptor***). Bob's latest is effectively more of the same, which is no bad thing in itself, but there are many impressive enhancements and additions, including over 100 varied forms of combat mission and an option of being able to fly the F-23 Advanced Tactical Fighter (this is a first) as well as an F-14, F-16 and F/A-18. ***Jetfighter II*** is a must for anyone with a suitably well-endowed PC compatible and £39.99 burning a hole in their back pockets.

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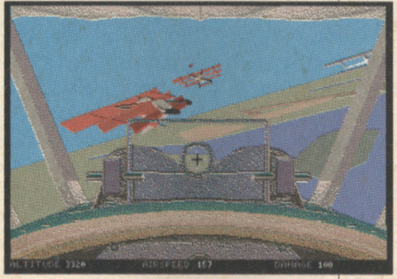

• Almost Blue as you chase the Red Baron, oh and that'll make your chums green.

Three-Sixty's ***Blue Max: Aces Of The Great War*** (which is available through Mindscape) is out now on the Amiga. Unfortunately this World War I dogfighting simulation promises more than it delivers. It's slow and unrewarding to play, and the disk swapping involved is a pain.

Amiga and Atari ST armchair pilots will soon be able to get their hands on MicroProse's long-awaited conversions of its critically acclaimed PC compatible flight-'n'-fight simulation ***F-15 Strike Eagle II*** (no prizes for guessing which plane is simulated here). These new incarnations come from the same stable as the 16-bit conversions of ***F-19 Stealth Fighter***, and similarly there have been additions made – most notably two new 'playgrounds'. One of ***F-15 II's*** most impressive features is its Director option which serves to generate a film-like atmosphere by ensuring that the view is always centred around the action, regardless of the player's position. The Amiga ***F-15 II*** is released in June for £34.99. Atari ST owners have to wait until July.

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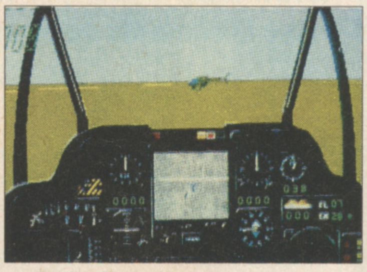
Less imminently from 'Prose are two other simulation sequels, namely ***F-117/A Stealth Fighter 2.0*** (an improved version of ***F-19***, which is something Atari ST and Amiga owners have already experienced) and ***Gunship 2000*** (which has sold over one million copies worldwide apparently). Whereas the original ***Gunship*** simulated the AH-



• Kill! Kill! Kill! Gunships galore as the skies are filled with red hot leaden death **(erm yes)**

PLAYING TIPS

ARMOUR GEDDON **Psygnosis • Atari ST, Amiga**

So an enemy missile's heading in your general direction, eh? Try one of these three tips for size ... If you intend to drop flares to attract the missile, do so in a straight line or in as shallow a turn as possible, otherwise there's the possibility of the flare being ignored by the missile. An alternative is to take advantage of the missile's small fuel supply (approximately 20-30 seconds' worth) and the fact that it can't turn very sharply. By flying straight towards the missile then veering off very quickly you should find it shaken off. The third option depends on whether there are any mountains in your vicinity. If so, use the mountains as cover and you should find the missile hits them instead. If you feel the need to launch your own missiles when being attacked, don't use your flares – there's a good chance your own missiles will go after them.

Don't bother with the hovercraft.

The helicopter's range makes it worthwhile, but it's not the best craft to take on other helicopters. Your best bet is to face the enemy chopper and stay still when it's closing in for the kill. Wait for it to drop down then let it have it.

The fighter's by far the best craft to use, but it does tend to stall far too easily.

If you want to take out teleports and the like from the comfort of the bomber you really need to have a cloaking device (it does use up a lot of fuel though). Don't try to carry any more than one teleport at a time as the weight of two or three makes the bomber incredibly difficult to fly.

When using the tank, the best way to take out chopper is to drive backwards and keep firing – you can usually hit them quite easily.

The rockets are virtually useless on other tanks as they have to be fired into the air.

The lasers are fine for taking out heavy vehicles but not buildings and the like. It takes rockets, missiles or bombs to destroy power nodes. ■

FLIGHT SIM NEWS UPDATE SPECIAL

64A Apache attack helicopter, its sequel offers a choice of seven more technologically advanced choppers to fly. ***Gunship 2000*** is released for the PC compatibles at the end of July, priced at £39.99. ***F-117/A Stealth Fighter 2.0*** on the other hand won't reach PC compatibles until October at a price of £39.99.

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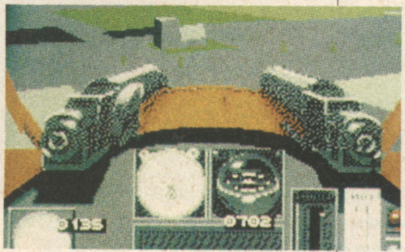

• Could this be the duel in your flight simulator collection? Read on to find out

Air Duel, by Glyn Williams, author of ***Cholo*** (remember that?) and more recently ***Warhead***, takes itself a little less seriously than these heavy duty simulations, and yet first impressions are that it's all the more playable for it. ***Air Duel*** started life as the World War I-based dogfight simulation ***Fokker*** for Activision. When the company wound down, Microprose picked up the product in question and it has since grown into a dogfighting simulation across four time zones – World Wars I and II, the present day and the future. An August release has been set for the Amiga, Atari ST and PC compatibles.

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Rowan, the team responsible for the 16-bit conversions of Falcon, is currently applying the finishing touches to ***Reach For The Skies: The Battle For Britain*** for PSS to commemorate the 50th anniversary of the Battle Of Britain. ***Reach For The Skies*** allows the battle to be fought from either the British or German point of view and as the pilot or controller of the relevant aircraft. A September release for the Amiga, Atari ST and PC compatible versions has been set but prices have yet to be determined.

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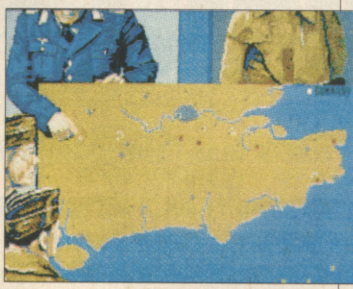
Flight Of The Intruder is also Rowan's handiwork, only this one's based on a Stephen Coonts novel (which was last year turned into a film starring Danny Glover – and it won't be appearing over here as it turns out) and is for publisher Spectrum HoloByte. The Amiga and Atari ST ***Flight Of The Intruders*** should hit the skies in July at prices to be announced (a PC compatible version was released in the third quarter of last year).

• • • • • • • • • • •

Two other Spectrum HoloByte wares worth a second glance are the tank-buster simulation ***Avenger A-10*** and the remodelled ***Falcon*** (featuring topographically modelled contoured landscapes of world hot spots, which is only really impressive if your PC compatible's hard enough). The titles join ***Tank*** to expand Spectrum HoloByte's Electronic Battlefield Series. Machines running EBS releases can be linked to form a common environment, allowing ***Tank***, ***Falcon*** and ***Avenger*** owners to play with or against each other. More diverse EBS-compatible releases are planned, but in the meantime ***Avenger A-10*** will be released towards the end of this year and ***Falcon 3.0*** should be available this June.



•Reach out and you will probably find yourself getting straffed from every which way. Reach for the Skies, 'celebrates' the 50th annivresary of the Battle of Britain.

• • • • • • • • • •

Finally, a digression ... Hot on the heels of ***Ninja III*** (see Games Week 132), System 3 is bringing its critically acclaimed 8-bit arcade adventure ***Myth*** to the 16-bit machines. Not that you'd recognise it – much (there again, maybe you would – a picture of it appeared with the ***Ninja III*** story last week). Bob Stevenson's original 8-bit pixels have been replaced by those of Paul Docherty, and the result sees a barbarian running, jumping, hacking, shooting and puzzle-solving his way through four distinctly different every-way scrolling time zones. ***Myth*** is released at the end of this month on the Amiga and Atari ST, priced at £25.99 apiece. ■

TOP 10 SIXTEEN-BIT GAMES

THIS WEEK	LAST WEEK	TITLE	PUBLISHER	MACHINE
1	9	*Armour Geddon*	Psygnosis	AG
2	2	*Lemmings*	Psygnosis	ST AG
3	4	*Fantasy World Dizzy*	Code Masters	ST AG
4	8	*Steve Davis World Snooker*	CDS	ST AG
5	10	*Killing Cloud*	Mirrorsoft	ST AG
6	1	*Gods*	Renegade/Mindscape	ST AG
7	7	*Chuck Rock*	Core Design	ST AG
8	3	*Defender of the Crown*	Mirror Image	ST AG PC
9	6	*Little Puff*	Code Masters	ST AG
10	5	*PGA Tour Golf*	Electronic Arts	ST AG PC

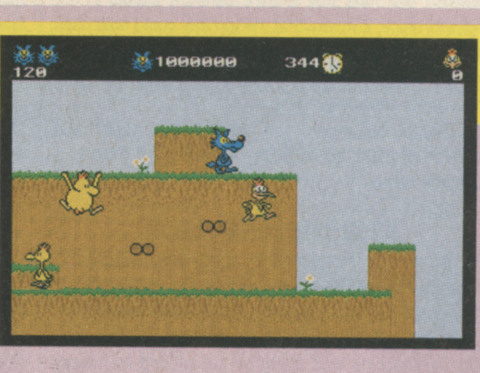
ST = Atari ST AG = Commodore Amiga PC = IBM PC or compatible OT = Other
Chart compiled by Gallup. © European Leisure Software Publishers Assoc.

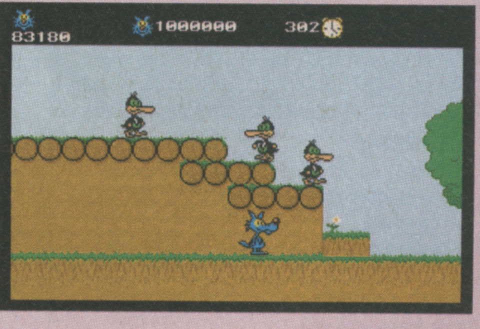
LUPO ALBERTO

Idea via The Software Business
Amiga £25.53 • Commodore 64 Cassette £11.23, Diskette £15.31
Planned versions: None

NCE HOT SHOT

LUPO ALBERTO
THE VIDEOGAME
IDEA





In complete contrast to all the seriousness of the flight simulations, here's an arcade style release which is fun and funny (on the Amiga anyway – the Commodore 64 version's best forgotten). Lupo Alberto is a cartoon character of Italian origin. He's a blue wolf who's got the hots for Marta, a hen would you believe? The feeling's mutual, which is why the pair of them often try to find quiet places to be alone. Ahem. And, as fate would have it, that's the objective of Lupo Alberto: The Video Game, a sort of simplified Super Mario Bros run-'n'-jump romp. There are 10 levels standing between Lupo (or Marta – or both if you fancy some simultaneous two-player action) and success. The reward for completing a level is a picture – the missing final frame of one of the 10 three-frame cartoons found in the back of the manual. The humour is very ... European, but it was bizarre enough to get me giggling. Equally entertaining is the platform action itself (particularly the fact that everything has only two-frames of animation and seems to dance to the silly music). Lupo is a little sluggish to control but his manoeuvrability in the air is ample compensation. A handful of peculiar special features (such as a helmet for head protection and 10-ton weights to throw) add to the entertainment. *Lupo Alberto: The Video Game* won't win any awards, but its simple, devil-may-care platform pranks are keeping me content and that's as good a reason as any to give Lupo a go.

LOW-COST LASER

A good laser printer can cost a four-figure sum. Keith Pomfret tested one that promised four-figure quality for a three-figure price: £550.

In days gone by, the transition from the more common dot matrix printer to a laser printer to enhance the output of a computer was considered a huge step. The Acer LP76 is a six page per minute laser that brings pristine copy closer to the grasp of the average punter.

A good 24 pin dot matrix printer could cost you upwards of £300 while, until recently, a laser wasn't to be seen for much less than £1,500.

QUALITY RESOLUTION

The advantages of using a laser printer instead of a dot matrix are that the 300 dots per inch resolution of a laser gives an almost book-like quality. This is managed by using high resolutions, and instead of impacting a ribbon with a pin to get the output, an electrostatic process fuses toner powder to the paper in much the same way as a photocopier.

> **If this is the value for money available, a lot more computer users will be upgrading to lasers.**

Prices have shrunk and your £550 buys you a perfectly serviceable 300 dpi laser printer complete with an auxiliary input tray. This is ideal if you regularly swap between two jobs that require different paper. In the *Express* office, it meant that the top tray could hold plain paper for proof-reading articles while the auxiliary tray held the higher quality and heavier headed note paper for external correspondence.

Bought separately, this second tray could cost upwards of £200, so including it in the pack price is a welcome bonus.

30 MINUTE INSTALLATION

The printer and the second input tray were supplied in separate boxes. The printer sits on top of the second tray, so the auxiliary tray instructions were needed first. These were straightforward enough and after ten minutes the machine was sitting on the second tray ready for the main installation job.

Installing a laser printer for the first time can be a daunting task with several strangely shaped internal devices to fit and configure.

The electrostatic 'drum', toner and other delicate parts are packaged separately. The instructions for installation were clear, concise and well illustrated and, more importantly, the pictures in the manual looked like the components in the machine. The parts fitted together like a rather pleasant technical jigsaw. With drum and toner cartridge in place, a small crank was turned to allow the toner to fall into its hopper and the printer was ready to be tested. The top sheet feeder was then slotted into its place and the output tray set to output to the top of the printer.

The total time taken between placing the box on the floor next to the bench and preparing to insert the plug in the wall was a fraction less than 30 minutes, including having a second person check each stage of the job and make a checklist as each instruction was followed. The documentation was clear and concise and the instructions simple to follow.

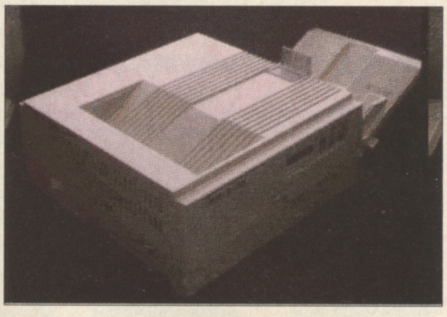
A PC was connected to the printer using a standard Centronics-style parallel cable, leaving us ready to run our series of tests.

DIAGNOSIS

It wasn't strictly necessary to connect a computer to the printer to test the output, as there was a built-in test and diagnosis program. Bringing this into play caused the printer to output a sheet containing its character set repeated several times on the page. This self test was a Godsend when a faulty cable left the computer blaming the printer whilst the printer quietly ignored it.

ON TEST

With the self test complete it was time to try something a little more adventurous. A word processor was loaded with 23 chapters of a never-to-be-published novel and we asked the LP76 to print this witty tome. Nothing happened but as we'd already tested the laser and knew that it worked, the cable was diagnosed as the probable fault. We replaced it and the printer decided that it had paper problems. The cryptic message on its LCD display didn't mean much, but on checking it against the error message reference in the manual we found that it had defaulted to a different paper size to the A4 we were feeding it.



• Time was you couldn't get hold of a laser for under £1500 - now you can get your hands on one for £550 ex VAT

It was a simple matter to change this but it would have been easier if the LCD display had said 'Wrong paper size'. With the correct size set and the word processor's output set to HP Laserjet II the pages started to pass through at around six pages per minute (ppm). This falls somewhere between the 4ppm of a personal laser and the now common 8ppm of an office machine. In text mode and when churning out book proofs, it was more than adequate.

After the word processing test it was on to something slightly more difficult. *Autoroute Plus,* the route planning program, was used to produces a table and a map depicting a journey.

The tables printed swiftly enough but the 512K memory in the printer wasn't enough to provide a 300dpi rendition of the map. The print density had to be reduced to 150dpi in order to achieve an output, although the resultant map was perfectly readable – if a little blocky.

A 1Mb memory upgrade sorted this problem out and allowed the maps to be printed at 300dpi. The printed output of the LP76 was comparable with any other desk laser printer. ■

FOR AND AGAINST

POINTS FOR:
- ▲ **Cheap**
- ▲ **Well specified and documented**
- ▲ **Expandable**
- ▲ **Quality output**

POINTS AGAINST
- ▼ **No Epson emulation**
- ▼ **512K RAM on-board not enough for graphics**
- ▼ **Noisy sheet feeder**

WHAT, WHERE AND HOW MUCH?

SPECIFICATIONS
Acer LP76
Six page per minute laser printer with HP Laserjet emulation
Auxiliary input tray included
Footprint: 16x16.5x8 inches (paper tray overhangs)
Memory: 512K expandable to 4.5Mb
Fonts: 6
Courier medium (portrait and landscape)
Courier bold (portrait and landscape)
Line printer (portrait and landscape)
Emulation: HP Laserjet II
Processor Motorola 68000 (10MHz)

UK Home computers 0793 695034; fax 541691
Cost £549.95 plus VAT and carriage (£649.95 inclusive)
One megabyte RAM expansion £149.95 inc VAT and carriage.

VERDICT

A few little niggles were more than balanced by the well specified, well featured LP76. At £550 – which includes a second paper tray – it is a quality product that is excellent value. If this is an indication of what is available, many more computer users will be upgrading to lasers. In short, it's a bargain and it's good.

WHAT ARE THE OPTIONS?

Several of the high volume resellers have started to stock end of line and not quite state-of-the-art lasers within the £500-£800 price range. Watch the adverts in the computer press for prices and bargains as they change weekly. Current cheapest is a laser from Crown in Lancashire at £500 plus VAT. It isn't as well specified as the Acer but nonetheless is very good value. Crown can be contacted on 0704 895815.

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Very good sailing simulator. CGA Req'd

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GAM-085 SCRABBLE
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Games designed with joysticks in mind, keyboard control also available on most, CGA Req'd

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EDU-038 MATH & LOGIC FOR KIDS
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One of the best shareware Word Processors around.

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Childrens Word Processor with large text and easy to understand menus.

WP-013 PC-INDEX
Could save hours of work by creating indexes based on your parameters. Good for long documents.

WP-016 THESAUR PLUS
A Thesaurus which has the ability to pop-up over any other program. (HD req'd)

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A simpler version of the program PC-WRITE, which is ideally suited for Disk based systems such as Laptop computers.

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DB-001 PC-FILE 5.0 (3 Disks)
Menu driven Dbase killer. Fully featured, ability to import export from other dbases, spreadsheets and wordprocessors. This program is highly recommended

DB-002 PC-GRAPH
Graphics generator for use with PC-FILE files.

DB-004 NEWBASE II 4A
Excellent user support for DBMS with a full menu package, combines power with simplicity.

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CAD drawing and art programme.

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HAMMING IT UP

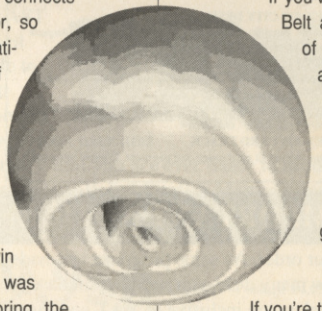
Jason Holborn takes Black Belt's new HAM-E Amiga graphics card for a spin. Is it the answer to every Amiga artist's dream?

The whole world's going 24-bit crazy! At least, that's the impression you get if you take even a fleeting glance at the news pages within both *Express* or a dedicated Amiga mag like *Amiga Format*. After six years of working around the limitations of the Amiga's HAM mode, Amiga artists are finally getting the chance to break into professional graphics – the market is about to be flooded with 24-bit graphic cards which promise to deliver workstation-quality graphics power to the humble Amiga.

If you want to get in on this 24-bit lark but can't quite afford the asking price of something like the Harlequin board, then US-based Black Belt Systems may well have come up with the answer to your artistic dreams. Badged as 'the colour display device for the rest of us', its HAM-E system promises to deliver the kind of graphics power previously unheard of on a basic Amiga. Better still is the price – for once you don't have to pay through the nose to get your hands on one of these silicon beauties; a cheque for £299 is all that you'll need to write.

SETTING IT UP...

Most 24-bit Amiga graphics cards are designed primarily for the A2000 upwards, but Black Belt has taken pity on we lowly A500 users by cramming the HAM-E hardware into its own box – a rather dull, cream affair about the size of an average modem. This connects to the Amiga via the RGB connector, so there are no problems with incompatibility between different types of Amiga. Indeed, HAM-E will be just as happy running on a 512K A500 or even an A1000 as on a 25MHz A3500UX. Fulls marks to Black Belt for that one!



The box a fairly cheap-looking affair, that certainly isn't going to win any prizes for good looks. In fact, I was actually quite surprised at how boring the HAM-E hardware is; you'd think that such a revolutionary device would have some form of pretty logo splattered across it. Indeed, unless you knew otherwise there would be virtually no way (short of opening the case) of knowing what that boring little box sitting by your computer actually is!

Looking around the back of the casing, Black Belt hasn't even gone to the trouble of labelling the connectors. Come on people, this really isn't acceptable. Thankfully, you'd need to be pretty thick not to be able to suss them out for yourself, but that's not the point at all. As it is, it's definately a case of RTFM (Read The Flippin' Manual)!

HAM-E lends itelf best to both ray tracing and digitising

Theoretically, there's no reason why the HAM-E hardware couldn't be used on a standard TV by simply plugging your modulator directly into the board's output, taking your signal from HAM-E instead of the Amiga. I haven't actually tested this myself, though, so you should check with Checkmate (no pun intended) before taking the plunge. And even if you can do this, you won't be able to get the full effect – all those lovely colours will probably end up being smeared and blurred beyond recognition.

If you've got an extra £100 to spare, Black Belt also produces an enhanced version of the HAM-E hardware which includes a neat little bit of extra circuitry called the 'Anti-Alias Machine'. Basically, this doubles both the horizontal and vertical resolution of HAM-E pictures by smoothing the image out at video signal level. Sounds too good to be true, eh?

...AND TUNING IT IN

If you're the kind of person who likes to plug in your new toy and start playing immediately, then you're in for a shock. Before HAM-E can display images of the quality shown on these pages, it must first be literally 'tuned in' to your system. According to Black Belt, this is neccessary because of signal level differences between different Amigas and different revisions of the Amiga's custom chip set. If you try using it without first tuning it in, chances are that all you'll get is a fuzzy mess on your screen. But at least once it has been tuned in, you'll never have to do it again (unless you want to use it on a different Amiga, that is).

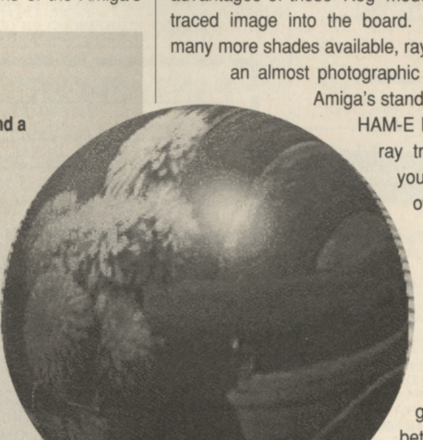
For a task that sounds so complicated, the actual tuning process isn't as difficult as you might think. In fact, as long as you follow the included instructions carefully it's done in a matter of seconds. Armed with a shielded Philips screwdriver, all you have to do is adjust a potentiometer until the image you see on your monitor screen looks correct. Luckily, Black Belt bundles a couple of test images in the package so the whole process is an absolute doddle.

GRAPHIC RESULTS

Before you rush out and buy HAM-E, hoping to produce the kind of results we see adorning the covers of glossy magazines, it must be stressed that it is not a 'true' 24-bit graphics card. Unlike something like ACS's Harlequin, HAM-E cannot actually display an image with 24 bits per pixel of colour information. To be precise, it is only 24-bit to the extent that it actually provides a 24-bit colour palette.

What the card does provide are three new screen modes than can be dragged about and depth-arranged like any normal Intuition screen. Two 'Reg' modes provide 256 and 512 colours on screen at once, chosen from HAM-E's impressive 16 million colour palette. Most impressive of all is HAM-E's 'Extended HAM' mode, which will display over 250,000 colours on-screen at once. And, unlike most similar products, all three modes can be viewed on a standard Amiga monitor – so there is no need to purchase an expensive multisync to view your images.

HAM-E's 'Reg' modes may sound rather limited when compared to the Amiga's standard 4,096-colour HAM mode, but what you must consider is that these 256 (or 512) colours can be chosen from a 16 million colour palette. You probably won't appreciate the advantages of these 'Reg' modes until you feed a ray-traced image into the board. Because there are so many more shades available, ray-traced images take on an almost photographic quality that leaves the Amiga's standard HAM for dead.



HAM-E lends itself best to both ray tracing and digitising. If you're lucky enough to own a digitiser that can output 24-bit files (most do anyway), then you can view your digitised images in any one of three display modes. Initially there doesn't seem to be a great deal of difference between a decent HAM image and its HAM-E equivelent, but look closely and you'll be amazed at the increase in quality

OTHER OPTIONS

HAM-E is only the first in a large number of Amiga graphic enhancers that will be appearing on the market within the next few months. Here is a rundown of the more immediate options.

● COLORBURST: developed by hardware specialists MAST, the ColorBurst system claims to be a true 24-bit graphics card for around £400. Although technical details are a little sketchy at present, you can expect a full review of the board within the pages of *Express* as soon as it arrives on these shores.

● DCTV: Digital Creations' DCTV system isn't yet available in PAL format, but the US company is hard at work converting it to work with European TV systems. For about the same price as the ColorBurst system, DCTV combines a 24-bit display card and a digitiser within one box. Unlike most systems, DCTV isn't RGB – instead, it outputs a composite signal that must be displayed on a separate monitor.

● HARLEQUIN – At the opposite end of the pricing spectrum is the Amiga Centre Scotland's revolutionary Harlequin board. For just under £2000, you get a broadcast-quality, high resolution, true colour frame buffer that can produce images of the quality you'd expect from a dedicated graphics workstation.

and definition that the new screen modes provide, compared with what you're used to.

HAM is without doubt a rather quirky display mode, and a major advantage of HAM-E's 'Reg' modes is that they do not suffer from 'HAM fringing' – a common problem with the standard display. Extended HAM works in roughly the same way as normal HAM mode, but there are an extra two bitplanes for HAM-E to work with. As a result, Extended HAM mode can display many more than the usual 256 (or 512) colours: 262,000, to be precise. As you can probably already appreciate, images displayed in this mode can look absolutely stunning.

IMAGE WORKS

HAM-E is so new that there is virtually nothing in the way of software support from third party software vendors. Just about the only package that directly supports HAM-E format images is ASDG's *Art Department Professional*, a powerful image processing system that is well worth buying if you intend using the HAM-E board at all seriously.

> **Images take on an almost photographic quality that leaves the Amiga's standard HAM for dead**

To convert images from your favourite digitiser or ray-tracing package to HAM-E format, Black Belt includes a program which converts a variety of different image formats into standard 24-bit IFF files. The current release can handle images in 12- or 24-bit *Turbo Silver* 'Impulse' format, *Sculpt* RAW files, NewTek's Dynamic HiRes, SHAM, 24 IFF with CLUT chunks, Targa, GIF, 18-bit *ScanLab* and a few more besides. These can then be fed into HAM-E's bundled image processing program *Image Professional*, for final rendering to any one of the three modes available. This conversion process takes time plus a large amount of disk space and memory, so a couple of megabytes, a second drive and a steady supply of coffee soon become neccessities rather than luxuries.

As you might expect, Black Belt also includes a HAM-E paint program which supports all three special screen modes. Unfortunately, *Deluxe Paint* it most certainly isn't. It's got a fair old selection of painting tools, but the user interface is difficult to use and the program is full of bugs. Black Belt has attempted to excuse this feeble attempt at a paint package by bundling it as a freebie, but personally I feel that the company should have left it out altogether rather than include what is undoubtedly a dire offering.

However, in Black Belt's defence I must just say that they have made the source code freely available to anyone who can be bothered to phone them up and ask for it. Who knows, perhaps some talented HAM-E user will come up with a decent replacement. If they do, I just hope that they send me a copy!

JUDGEMENT TIME

HAM-E certainly isn't the last word in Amiga graphic cards, but it's about as close as most of us will ever get to 'true' 24-bit cards such as the Harlequin. It may be cheap, but it is certainly no slouch where features are concerned. If Black Belt had sold it at double the price, it would still be one hell of a bargain. As it is, if you're seriously into Amiga graphics then you'd be a fool to pass up on this baby!

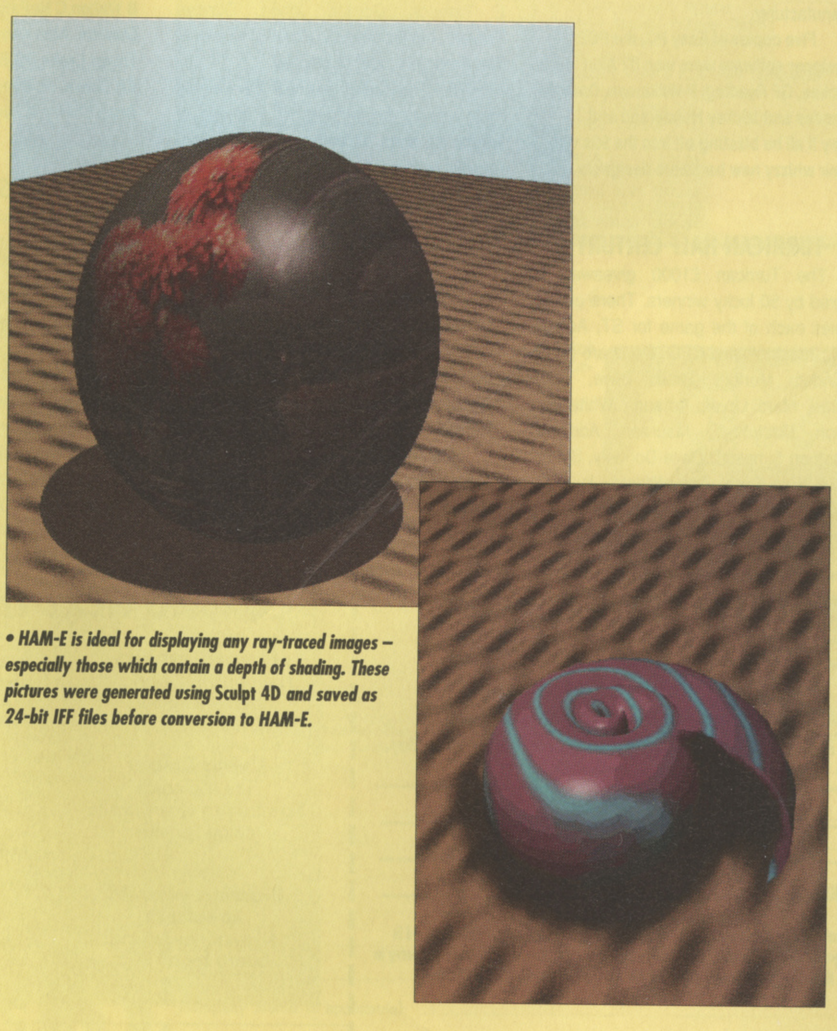
My thanks go to Brian Larkman for his invaluable assistance during the preparation of this article. ■

HAM-E £299 (Basic model) £399 (With 'Anti-Alias Machine') Checkmate Digital 071 923 0658

OTHER OPTIONS

• *Although we can't reproduce the results perfectly due to the conversion process involved in printing Amiga screen grabs, hopefully these images will give some indication of HAM-E's facilities.*

• *This 250,000-colour picture shows the highest resolution HAM-E is capable of. It was grabbed using DigiView and saved as a 21-bit file before conversion to HAM-E.*



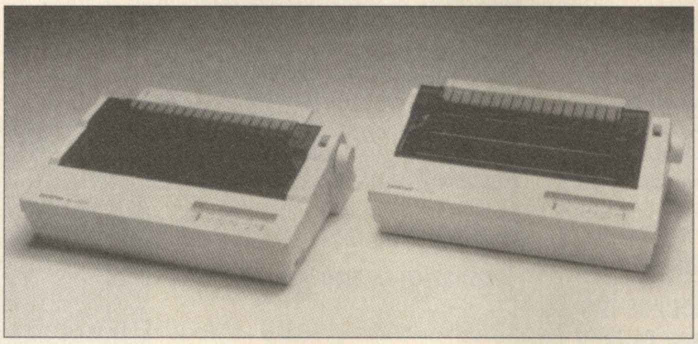
• *HAM-E is ideal for displaying any ray-traced images – especially those which contain a depth of shading. These pictures were generated using Sculpt 4D and saved as 24-bit IFF files before conversion to HAM-E.*

WHO WON?

We've fired up the Express Tombola to see who's in with a chance in the £4000 prize giveaway. So with no further ado let's see if you're one of the lucky winners...

The Express Compo giveaway has been drawn again and 85 lucky readers will be hauling away their prizes. We've turned the handle, mixed up the entries and invited the Queen to draw the winners and and a little decorum to the proceedings.

Unfortunately, she was too busy representing British interests in the United States. Still, the show must go on and we found a substitute. So it was that the white gloved hand of Princess Pomfret of the Neverlands reached into the Tombola's drum and drew out these lucky winners:



• A brace of Brother printers are part of the Express £4000 prize giveaway. Will you get one?

PRINCE OF PRINTERS

The "He 'aint heavy" compo for a pair of Brother printers was won by Nigel Head and George Mackenzie. Each will receive their printer directly from the manufacturer.

Five copies of Easy PC, the PCB designer software were won by Alan Stokes, GF Reading, P Wilkinson, Dave Rhodes and Mickey Henderson and they'll all be blasting off into the 90s with their whizzy new hardware designers.

TURRICAN HALF CENTURY

The Turrican £1000 giveaway is shared by 50 lucky winners. There are 10 copies each of the game for ST, Amiga, C64, Spectrum and CPC. these are going to Adam Morton, James Price, Terry Dalton, Marc Lever, Amanda Whiteside, Jason Macintosh, Maureen Addison, Jonathon Simpson, Dave Donnely, Simon Webb, Eric Birch, Andy Wright, Jo 'Fizz' Arnold, AP Martin, Wally Wallington, PD Weeks, Tim Read, Fiona Lonsdale, Rick Bird, Howard Manley, Jim Rushworth, Mike Logan, M Patel, FT Rogowicz, Jeff Moore,Keith Gartside, Miller Welsh, PP Clarke, M Rush, D Cameron, Glyn Talbot, Peter Mellor, Yvonne Partick, Miles Pace, J Reid, Will Hartley, Sian Melling, C Handforth, RA Simson, Don Fish, L Paine, E Tarbuck, Gordon Jones, Duncan Travers, Ian Bardsley, J Morelli, H Ford, M Tie, Fred Lord, and M Brierley.

The Turrican prizes will be winging their way to the winners in a couple of weeks as soon as we've given the winners list to the software house.

JUST THE FAX, MA'AM

The Datatech Fax card goes to Ron Gifford and the runners up in the Fax compo who receive Fax Builder fax software are Chris Garbutt, L Barnes, J Alexander, Michael Palmer, NA Crookes, Nic Evans and Jack Adams.

Fax Builder winners should contact distributor LTS direct on (0386) 792617 to claim their prizes.

CODE CRACKERS

Twenty more phone callers will be getting the STD code breaker direct from Sector Software They are: J Morriss, Capt E Fieldson, Nick Taylor, SA Rudley, B Walton,C McPaike,DPC Brown,G Stevens, Alan Kerr, Simon Pool, M Carr, Trevor Leake,DG Beck, John Vickers, EA Cooke, JL Bond,Henry Thompson, Brian Sherry, K Leyland, Carl Littler.

FIRST STEPS

The first winner in our £5000 Commodore First Steps giveaway is Michael Barton. We'll be telling Commodore to post a £500 First Steps software pack to him.

AND THERE'S MORE TO COME!

If you've not won a prize yet, keep on posting the coupons. Up for grabs in coming competitions are a Pentax scanner, a laser printer, a LAN station, 4.7 tonnes of software and a booby prize of a night out with the Express staffer of your choice. ■

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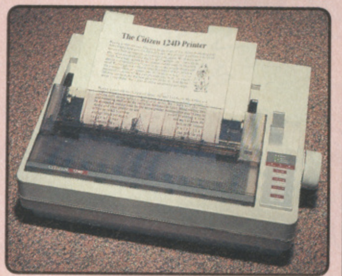

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SILICA PRICE:	£222.08

£189
+VAT = £222.08

192 CPS DRAFT 24 PIN

Swift 24 Colour Printer

SWIFT 24 - *COLOUR!*

The Citizen Swift 24 is one of Europe's best selling printers and has won awards including Printer Of The Year 1990. Its rapid print speed, quality and black or colour options, make it a natural choice.

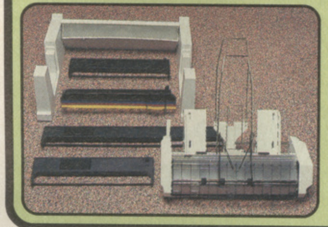
- *24-pin Impact Printer*
- *Print Speed 192cps Draft*
- *4 NLQ Fonts (64cps)*
- *8K Buffer*
- *Epson, IBM & NEC P6+ Emulation*
- *Advanced Paper Parking*
- *FREE Starter Kit*
- *FREE Colour Kit*

FREE! COLOUR KIT

RRP	£428.88
STARTER KIT	£29.95
COLOUR KIT	£44.65
TOTAL RRP:	£503.48
SAVING:	£199.15
SILICA PRICE:	£304.33

£259
+VAT=£304.33

PRINTER ACCESSORIES



SHEET FEEDERS		
PRA 1200	120D	£71.38
PRA 1215	124D/Swift 9/24	£88.70
PRA 1228	124D/Swift 9/24	£42.00
SERIAL INTERFACES		
PRA 1189	120D+	£56.45
PRA 1209	Swift 9/124D	£32.25
PRA 1709	Swift 24	£26.38
PRINTER STAND		
PRA 1242	124D/Swift 9/24	£24.03
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RIB 3924	124D/Swift 24 Black	£4.70
RIB 3936	Swift 9/24 Colour	£15.63
COLOUR KITS		
PRA 1236	Swift 9/24	£39.65

All prices include VAT and Free delivery.

FREE! STARTER KIT

Every Citizen printer from Silica, comes complete with the Silica Printer Starter Kit, including everything you need to get up and running with your new printer immediately, FREE OF CHARGE!

- *3½" Dual Format Disk with Amiga & ST Printer Drivers*
- *3½" Disk with Drivers for Microsoft Windows 3*
- *2 Metre Parallel Printer Cable*
- *200 Sheets of High Quality Continuous Paper*
- *200 Continuous Address Labels on Tractor Feed*
- *5 Continuous Envelopes on Tractor Feed*

If you already own a printer, and would like a Silica Printer Starter Kit, you may order one (ref: KIT 5000) for the special Silica price of £24.95 - £5 off RRP!

NORMAL RRP
£29.95

200 PRINTER PACK

SILICA SYSTEMS OFFERS YOU

- ***FREE OVERNIGHT COURIER DELIVERY:*** On all hardware orders shipped in the UK.
- ***TECHNICAL SUPPORT HELPLINE:*** Team of PC technical experts at your service.
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- ***PAYMENT:*** By cash, cheque and all major credit cards.

Before you decide when to buy your new printer, we suggest you think very carefully about WHERE you buy it. Consider what it will be like a few months after you have made your purchase, when you may require additional peripherals or software, or some technical help and advice. And, will the company you buy from contact you with details of new products? At Silica Systems, we ensure that you will have nothing to worry about. Silica Systems is one of the UKs leading independent computer dealers and provides a quality service to users at home, in education and in business throughout the nation. Silica have been established for over 12 years, and have an annual turnover of £13 million. With our unrivalled experience and expertise, we can now claim to meet our customers requirements with an understanding which is second to none. But don't just take our word for it. Complete and return the coupon now, for our latest Free literature on the Citizen printer range and begin to experience the "Silica Systems Service".

SILICA SYSTEMS

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To: Silica Systems, Dept NCE 0591 - 55, 1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX

PLEASE SEND CITIZEN PRINTER INFORMATION

Mr/Mrs/Ms: .... Initials: .... Surname: ....

Address: ....

....

.... Postcode: ....

Tel (Home): .... Tel (Work): ....

Company Name (if applicable): ....

Which computer(s), if any, do you own? ....

E&OE - Advertised prices and specifications may change - Please return the coupon for the latest information.

GO WiLd!
TOKI
HASLAM

No ugly wart-nose is gonna make a monkey out of me! But that's just what that witch has done - one minute I'm the mighty Toki and the next I'm having breakfast delousing my armpits, I can't walk a step without tripping over my knuckles and, oh, there's an overhanging vine - time to swing out sister! But my broken heart is going ape. My beloved Miho (I can't wait to share a banana with her) has been kidnapped and somehow I've got to regain my manhood - until then I'm just swingin' in the rain!
The arcade sensation by Fabtek Inc. is now available for your micro.

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